



VioStor NVR

Network Video Recorder

User Manual (Version: 3.2.0)

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FOREWORD

Thank you for choosing QNAP products! This user manual provides detailed instructions of using the product. Please read carefully and start to enjoy the powerful functions of the product!

NOTE

- All features, functionality, and other product specifications are subject to change without prior notice or obligation.
- All brands and products names referred to are trademarks of their respective holders.

LIMITED WARRANTY

In no event shall the liability of QNAP Systems, Inc. (QNAP) exceed the price paid for the product from direct, indirect, special, incidental, or consequential software, or its documentation. QNAP makes no warranty or representation, expressed, implied, or statutory, with respect to its products or the contents or use of this documentation and all accompanying software, and specifically disclaims its quality, performance, merchantability, or fitness for any particular purpose. QNAP reserves the right to revise or update its products, software, or documentation without obligation to notify any individual or entity.



CAUTION

1. Back up your system periodically to avoid any potential data loss. QNAP disclaims any responsibility of all sorts of data loss or recovery.
2. Should you return any components of the product package for refund or maintenance, make sure they are carefully packed for shipping. Any form of damages due to improper packaging will not be compensated.

Important Notice

- **Reading instructions**

Please read the safety warnings and user manual carefully before using this product.

- **Power supply**

This product can only be used with the power supply provided by the manufacturer.

- **Service**

Please contact qualified technicians for any technical enquires. Do not repair this product by yourself to avoid any voltage danger and other risks caused by opening this product cover.

- **Warning**

To avoid fire or electric shock, do not use this product in rain or humid environment. Do not place any objects on this product.

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Safety Warning

1. This product can operate normally in the temperature of 0°C–40°C and relative humidity of 0%–90%. Please make sure the environment is well-ventilated.
2. The power cord and devices connected to this product must provide correct supply voltage.
3. Do not place this product in direct sunlight or near chemicals. Make sure the temperature and humidity of the environment are in optimized level.
4. Unplug the power cord and all connected cables before cleaning. Wipe this product with a wet towel. Do not use chemical or aerosol to clean this product.
5. Do not place any objects on this product for the server's normal operation and to avoid overheat.
6. Use the flat head screws in the product package to lock the hard disks in this product when installing hard disks for proper operation.
7. Do not place this product near any liquid.
8. Do not place this product on any uneven surface to avoid falling off and damage.
9. Make sure the voltage is correct in your location when using this product. If you are not sure about the voltage, please contact the distributor or the local power supply company.
10. Do not place any object on the power cord.
11. Do not attempt to repair this product in any occasions. Improper disassembly of the product may expose you to electric shock or other risks. For any enquiries, please contact the distributor.
12. The chassis models should only be installed in the server room and maintained by the authorized server manager or IT administrator. The server room is locked by key or keycard access and only certified staff is allowed to enter the server room.

CAUTION

- RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.
- DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

Chapter 1. Introduction

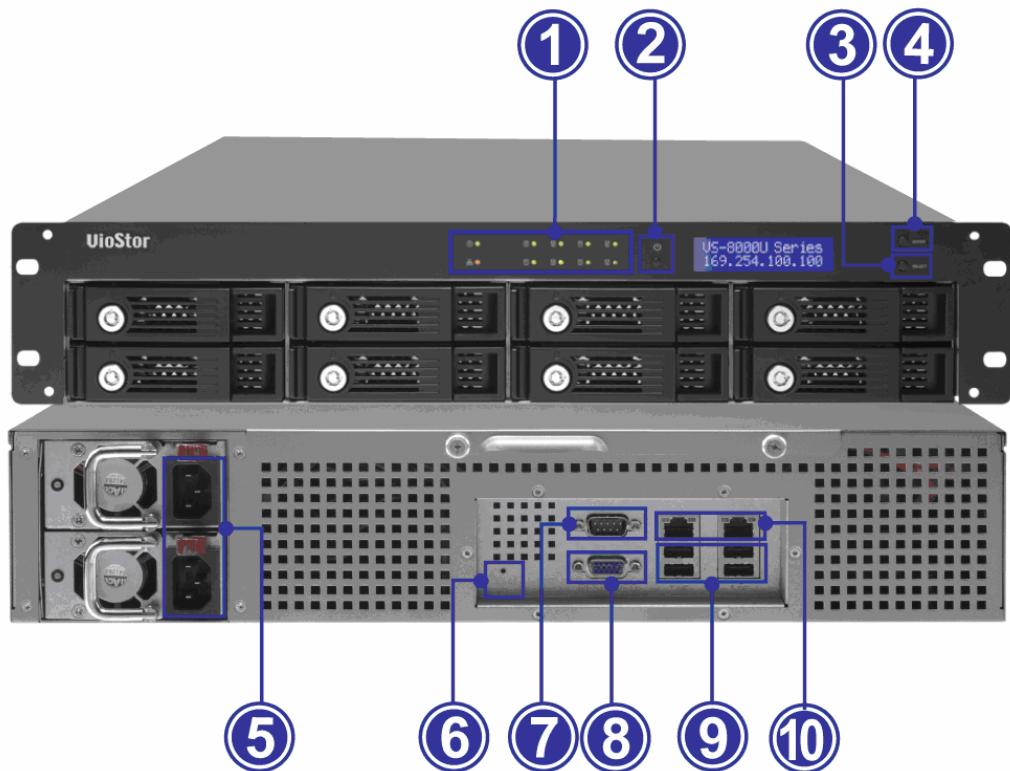
1.1 Overview

QNAP VioStor (hereafter referred to as NVR or VioStor) is the high performance network surveillance solution for network-based monitoring of IP cameras, video recording, playback, and remote data access. Up to 120 channels from multiple QNAP NVR servers can be monitored simultaneously. The NVR supports IP-based cameras from AXIS, ACTi, A-MTK, Arecont Vision, AVTECH, Canon, CNB, DIGITUS, D-Link, EDIMAX, ELMO, EtroVision, GANZ, Hikvision, iPUX, IQeye, LevelOne, Messoa, MOBOTIX, Nakayo, Panasonic BB/ BL/ i-Pro, SANYO, SONY, TOSHIBA, TRENDnet, VIVOTEK, VIOSECURE, and Y-CAM. Users can select to record the video in H.264, MxPEG, MPEG-4, or MJPEG video compression. The NVR offers diversified display modes and recording features, e.g. schedule recording, alarm recording, alarm recording schedule. The NVR also supports data search by date and time, timeline, event, and intelligent video analytics (IVA), including motion detection, missing object, foreign object, out of focus, and camera occlusion. All the functions can be configured by the IE web browser.

* MxPEG video compression is not supported by VS-201, VS-101, NVR-104.

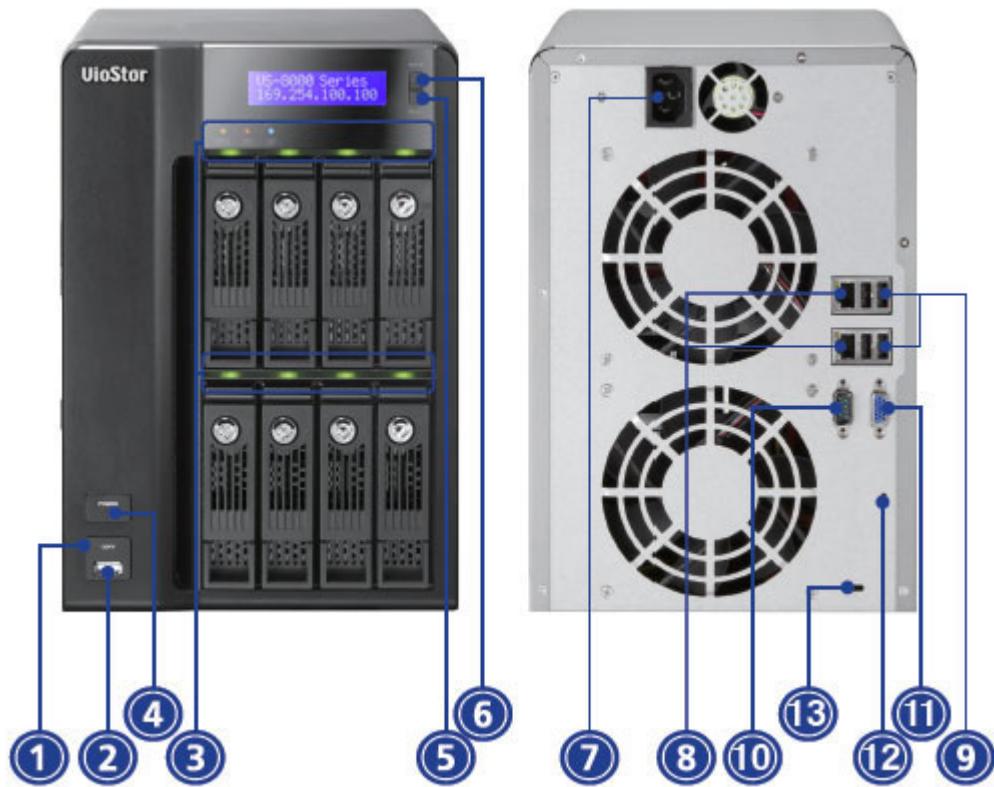
1.2 Hardware Illustration

1.2.1 VS-8040U-RP/ VS-8032U-RP/ VS-8024U-RP



1. LED indicators: Status, LAN, USB, HDD1–8
2. Power button
3. Select button
4. Enter button
5. Power connector
6. Password & network settings reset button
7. RS-232
8. VGA (reserved)
9. USB 2.0 x 4
10. Giga LAN x 2

1.2.2 VS-8040 / VS-8032 / VS-8024



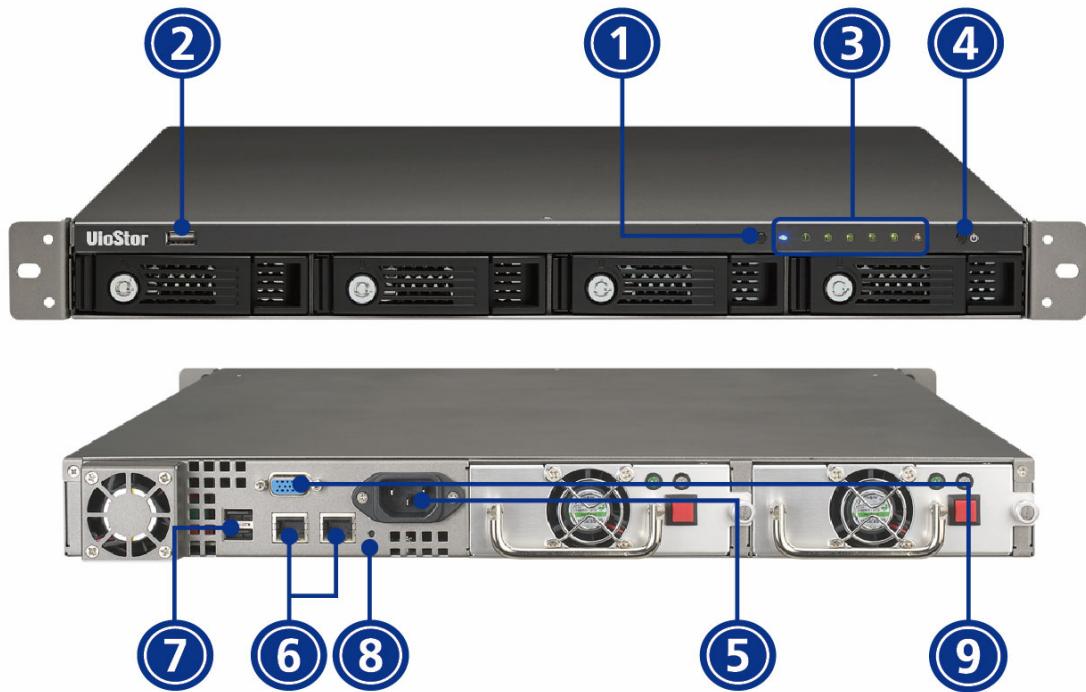
1. One touch auto video backup button
2. USB 2.0
3. LED indicators: Status, LAN, USB, HDD1-8
4. Power button
5. Select button
6. Enter button
7. Power connector
8. Giga LAN x 2
9. USB 2.0 x 4
10. RS-232
11. VGA (reserved)
12. Password & network settings reset button
13. Kensington security slot

1.2.3 VS-5020/ VS-5012



1. One touch auto video backup button
2. USB 2.0
3. LED indicators: USB, Status, HDD1–HDD5, LAN
4. Power button
5. Select button
6. Enter button
7. Power connector
8. Giga LAN x 2
9. USB 2.0 x 4
10. eSATA connector
11. VGA (Reserved)
12. RS-232 port
13. Password & network settings reset button
14. Kensington security slot

1.2.4 VS-4016U-RP



1. One touch auto video backup button
2. USB 2.0
3. LED indicators: USB, Status, HDD1–HDD4, LAN
4. Power button
5. Power connector
6. Giga LAN x 2
7. USB 2.0 x 2
8. Password & network settings reset button
9. VGA (reserved)

1.2.5 VS-2012/ VS-2008



1. One touch auto video backup button
2. USB 2.0
3. LED indicators: HDD1, HDD2, LAN & eSATA
4. Power button
5. Power connector
6. Giga LAN x 2
7. USB 2.0 x 2
8. Password & network settings reset button
9. Kensington security slot
10. eSATA x 2 (reserved)
11. VGA (reserved)

1.2.6 VS-201P/ V



1. One touch auto video backup button
2. USB 2.0
3. LED indicators: USB, status, HDD1, HDD2, LAN, and power
4. Power button
5. Power connector
6. Giga LAN
7. USB 2.0 x 2
8. Password & network settings reset button!!
9. Kensington security slot

1.2.7 NVR-104P/ V



1. One touch auto video backup button
2. USB 2.0
3. LED indicators
4. Power button
5. USB 2.0 x 2
6. eSATA port
7. Giga LAN
8. Password & network settings reset button
9. Power connector
10. Kensington security slot

1.2.8 VS-101P/ V



1. One touch auto video backup button
2. USB 2.0
3. LED indicators
4. Power button
5. Power connector
6. Giga LAN
7. USB 2.0 x 2
8. Password & network settings reset button
9. Kensington security slot
10. eSATA port

Chapter 2. Install the VioStor

For the information of the hardware installation, please refer to the "Quick Installation Guide" in the product package.

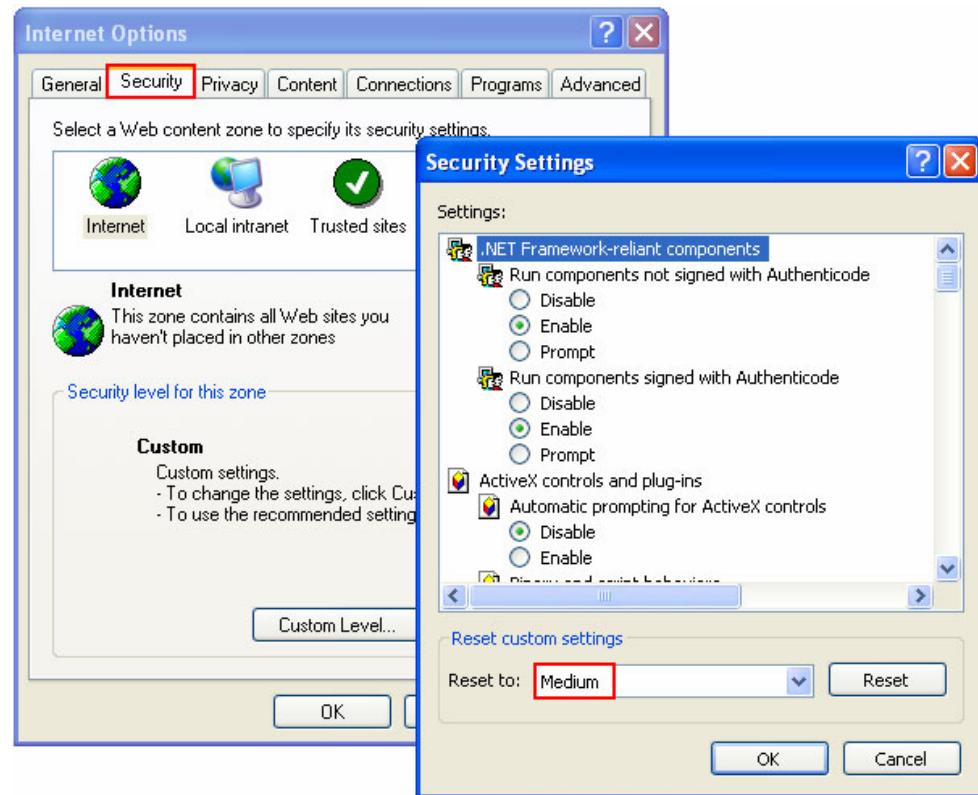
2.1 Personal Computer Requirements

For better system performance, your computer should at least fulfill the following requirements:

No. of Channels	Format	CPU	Others
4	M-JPEG	Intel® Pentium 4 CPU, 2.0 GHz or above	<ul style="list-style-type: none">• Operation system: Microsoft® Windows® XP/ Vista (64-bit)• Memory: 1 GB or above• Network port: 100Mbps Ethernet port or above• Web browser: Microsoft® Internet Explorer 6.0 or above• CD-ROM drive• Recommended resolution: 1024 x 768 pixels or above
	MPEG-4/ MxPEG/ H.264	Dual core CPU, 2.0 GHz or above	
8	M-JPEG	Intel® Pentium 4 CPU, 2.2 GHz or above	<ul style="list-style-type: none">• Operation system: Microsoft® Windows® XP/ Vista (64-bit)• Memory: 1 GB or above• Network port: 100Mbps Ethernet port or above• Web browser: Microsoft® Internet Explorer 6.0 or above• CD-ROM drive• Recommended resolution: 1024 x 768 pixels or above
	MPEG-4/ MxPEG/ H.264	Dual core CPU, 2.2 GHz or above	
12	M-JPEG	Intel® Pentium 4 CPU, 2.4 GHz or above	<ul style="list-style-type: none">• Operation system: Microsoft® Windows® XP/ Vista (64-bit)• Memory: 1 GB or above• Network port: 100Mbps Ethernet port or above• Web browser: Microsoft® Internet Explorer 6.0 or above• CD-ROM drive• Recommended resolution: 1024 x 768 pixels or above
	MPEG-4/ MxPEG/ H.264	Dual core CPU, 2.4 GHz or above	
16	M-JPEG	Intel® Pentium 4 CPU, 2.6 GHz or above	<ul style="list-style-type: none">• Operation system: Microsoft® Windows® XP/ Vista (64-bit)• Memory: 1 GB or above• Network port: 100Mbps Ethernet port or above• Web browser: Microsoft® Internet Explorer 6.0 or above• CD-ROM drive• Recommended resolution: 1024 x 768 pixels or above
	MPEG-4/ MxPEG/ H.264	Dual core CPU, 2.6 GHz or above	
20	M-JPEG	Intel® Pentium 4 CPU, 2.8 GHz or above	<ul style="list-style-type: none">• Operation system: Microsoft® Windows® XP/ Vista (64-bit)• Memory: 1 GB or above• Network port: 100Mbps Ethernet port or above• Web browser: Microsoft® Internet Explorer 6.0 or above• CD-ROM drive• Recommended resolution: 1024 x 768 pixels or above
	MPEG-4/ MxPEG/ H.264	Dual core CPU, 2.8 GHz or above	
40	M-JPEG	Dual core CPU, 2.4 GHz or above	<ul style="list-style-type: none">• Operation system: Microsoft® Windows® XP/ Vista (64-bit)• Memory: 1 GB or above• Network port: 100Mbps Ethernet port or above• Web browser: Microsoft® Internet Explorer 6.0 or above• CD-ROM drive• Recommended resolution: 1024 x 768 pixels or above
	MPEG-4/ MxPEG/ H.264	Quad core CPU 2.4 GHz or above	

Security Settings of the Web Browser

Please make sure the security level of the IE browser in Internet Options is set to Medium or lower.



2.2 Hard Disk Compatibility List

This product works with 2.5"/ 3.5" SATA hard disk drives from major hard disk brands. For the HDD compatibility list, please visit http://www.qnapsecurity.com/pro_compatibility.asp.



QNAP disclaims any responsibility for product damage/ malfunction or data loss/ recovery due to misuse or improper installation of hard disks in any occasions for any reasons.

2.3 IP Camera Compatibility List

For the information of supported IP camera models, please visit QNAP Security website http://www.qnapsecurity.com/pro_compatibility_camera.asp.

2.4 Check System Status

LED Display & System Status Overview

LED	Colour	LED Status	Description
USB	Blue	Flashes blue every 0.5 sec	1) A USB device is detected 2) A USB device is being removed from the NVR 3) The USB device connected to the front USB port of the NVR is being accessed 4) The NVR data is being copied to the external USB device
		Blue	The USB device connected to the front USB port of the NVR is ready
		Off	The NVR has finished copying the data to the USB device connected to the front USB port*
eSATA [†]	Orange	Flashes	The eSATA device is being accessed
System Status	Red/ Green	Flashes green and red alternately every 0.5 sec	1) The hard drive on the NVR is being formatted 2) The NVR is being initialised 3) The system firmware is being updated 4) RAID rebuilding is in process 5) Online RAID Capacity Expansion is in process 6) Online RAID Level Migration is in process
		Red	1) The hard drive is invalid 2) The disk volume has reached its full capacity 3) The disk volume is going to be full 4) The system fan is out of function* 5) An error occurs when accessing (read/write) the disk data 6) A bad sector is detected on the hard drive 7) The NVR is in degraded read-only mode (2 member drives fail in a RAID 5 or RAID 6 configuration, the disk data can still be read)## 8) (Hardware self-test error)

System Status	Red/ Green	Flashes red every 0.5 sec	The NVR is in degraded mode (one member drive fails in RAID 1, RAID 5 or RAID 6 configuration)*
		Flashes green every 0.5 sec	1) The NVR is starting up 2) The NVR is not configured 3) The hard drive is not formatted
		Green	The NVR is ready
		Off	All the hard drives on the NVR are in standby mode
HDD	Red/ Green	Flashes red	The hard drive data is being accessed and a read/ write error occurs during the process
		Red	A hard drive read/ write error occurs
		Flashes green	The hard drive data is being accessed
		Green	The hard drive can be accessed
LAN	Orange	Orange	The NVR is connected to the network
		Flashes orange	The NVR is being accessed from the network

* Not applicable to 1-bay models

† The eSATA port is available on certain models only. Please refer to the [product specifications](#) for more information.

4-bay models or above only

Beep Alarm (beep alarm can be disabled in "System Tools" > "Hardware Settings")

Beep sound	No. of Times	Description
Short beep (0.5 sec)	1	1) The NVR is starting up 2) The NVR is being shut down (software shutdown) 3) The user presses the reset button to reset the NVR 4) The system firmware has been updated
Short beep (0.5 sec)	3	The user tries to copy the NVR data to the external storage device from the front USB port, but the data cannot be copied.
Short beep (0.5 sec), long beep (1.5 sec)	3, every 5 min	The system fan is out of function*
Long beep (1.5 sec)	2	1) The disk volume is going to be full 2) The disk volume has reached its full capacity 3) The hard drives on the NVR are in degraded mode 4) The user starts the HDD rebuilding process
	1	1) The NVR is turned off by force shutdown (hardware shutdown) 2) The NVR has been turned on successfully and is ready

* Not applicable to 1-bay models

2.5 System Configuration

Install the Finder

1. Execute the product CD, the following menu is shown. Click "Install Finder".

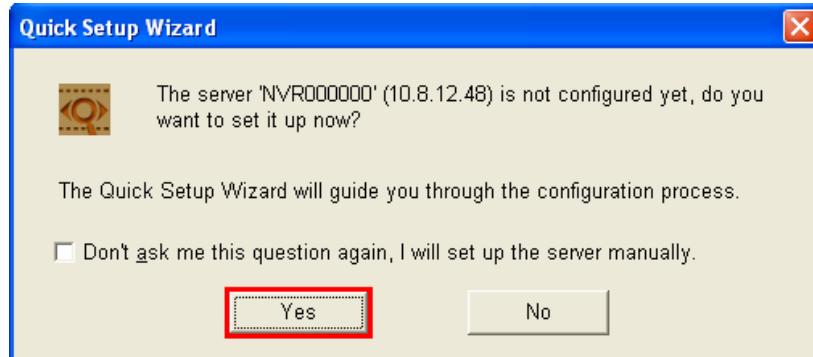


- Follow the instructions to install the Finder. If you are using Windows XP SP2 or above, the following screen will be shown. Click "Unblock".



- The Finder detects the VioStor in the network and prompts you to perform quick setup. Click "Yes" to continue.

Note: If the VioStor is not found, click "Refresh" to try again.



4. You must enter the administrator name and password to perform quick setup.

The default administrator name and password are as below:

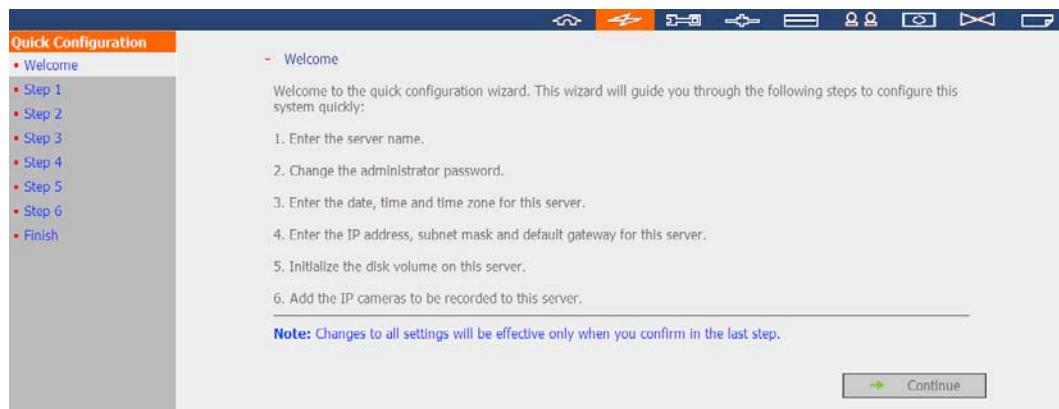
Use name: **admin***

Password: **admin**

*If you are using VS-201/ VS-101/ NVR-104, the login name is "administrator" and the login password is "admin".

Note: Please make sure all the IP cameras are configured and connected to the network.

5. The quick configuration page will be shown. Click "Continue" and follow the instructions to finish the configuration. For further information, please refer to [Chapter 5.1](#).



6. Click "Start installation" to execute the quick configuration.

- [Finish](#)

The changes you have made to the server are as below. Click "Start installation" to begin the quick configuration; or click "Back" to return to the previous steps to modify the settings.

Server Name :	NVR
Password:	The password is unchanged.
Time Zone :	(GMT+08:00) Taipei
Time Setting:	2009/7/2 11:19:41
Network :	Obtain TCP/IP settings automatically via DHCP
Primary DNS Server	10.8.2.11
Secondary DNS Server	10.8.2.9
IP Camera :	You have configured 13 camera(s)
Disk configuration:	Do not set disk configuration
Drive 1:	WDC WD7500AACS-00D6B01.0 698.64 GB
Drive 2:	WDC WD7500AACS-00D6B01.0 698.64 GB
Drive 3:	WDC WD7500AACS-00D6B01.0 698.64 GB
Drive 4:	WDC WD7500AACS-00D6B01.0 698.64 GB

[Back](#) - [Start installation](#)

7. The quick configuration is completed and you can start to use the VioStor. Click "Start Monitoring" to view the live video from the cameras or click "Close" to return to the system administration home page.

[System is initializing, please wait.](#)

The system is being configured, do NOT power off the server or unplug the hard drive(s).

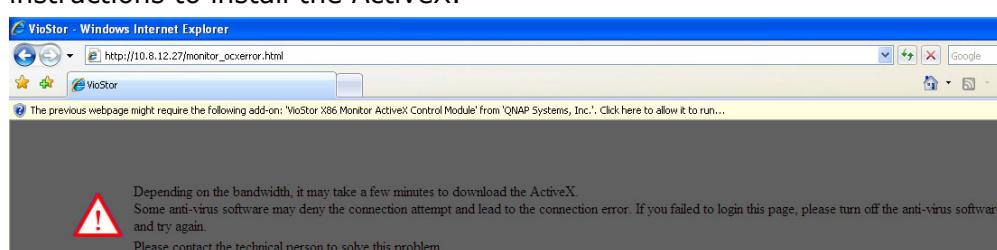
1. Enter the server name.	✓
2. Change the administrator password.	✓
3. Enter the date, time and time zone for this server.	✓
4. Enter the IP address, subnet mask and default gateway for this server.	✓
5. Initialize the disk volume on this server.	✓
6. Add the IP cameras to be recorded to this server.	✓

 System configuration completed.

- [Start Monitoring](#) - [Close](#)

Congratulations! You have successfully configured the system. Please click "Close" to return to the home page or "Start Monitoring" to enter the monitoring page.

8. The first time you connect to the server, please install the ActiveX. Follow the instructions to install the ActiveX.



Depending on the bandwidth, it may take a few minutes to download the ActiveX. Some anti-virus software may deny the connection attempt and lead to the connection error. If you failed to login this page, please turn off the anti-virus software and try again. Please contact the technical person to solve this problem.

When the live video is displayed and the recording indicator is shown, you have successfully installed the VioStor.



Chapter 3. Start to Use the VioStor

When you have installed the VioStor and other hardware, and connected it to the network, you can use the browser in your PC to connect to the VioStor. It is recommended to use Microsoft Internet Explorer for browsing.

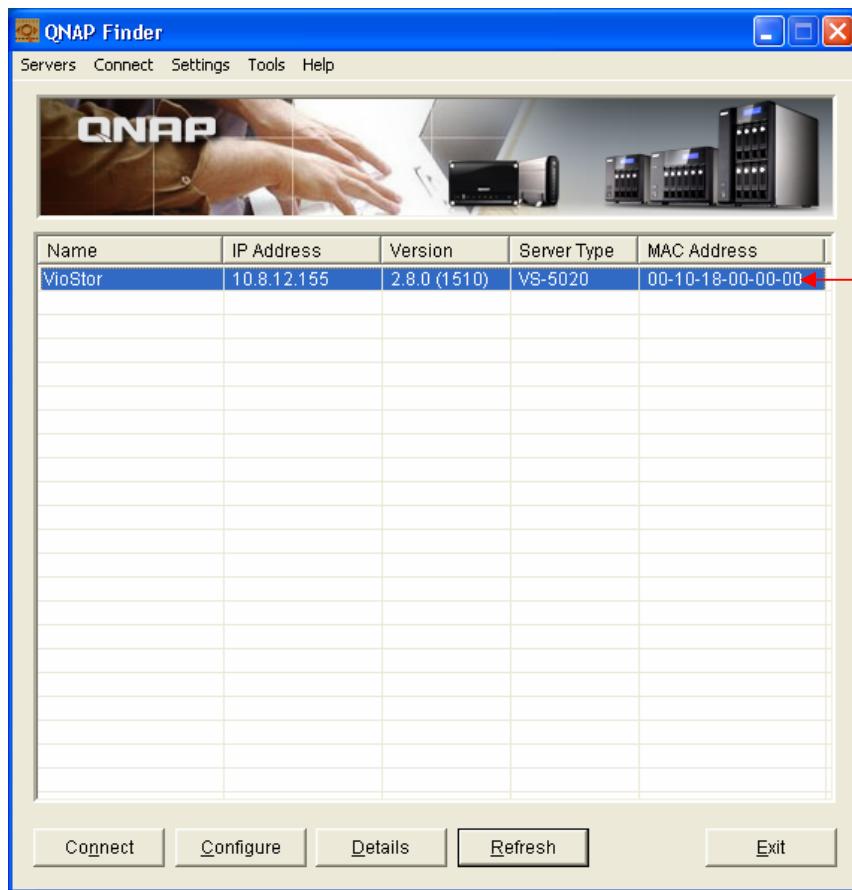
Important Notice:

Before you start to use the VioStor, you must install the hard disks in the VioStor, finish disk volume configuration and format the hard disk(s). Otherwise, the system may not function properly.

3.1 Connect to the VioStor

Follow the steps below to connect to the VioStor monitoring page:

1. Open an IE browser and enter the IP address of the VioStor or run Finder. When the following screen is shown, double click the name of the VioStor.



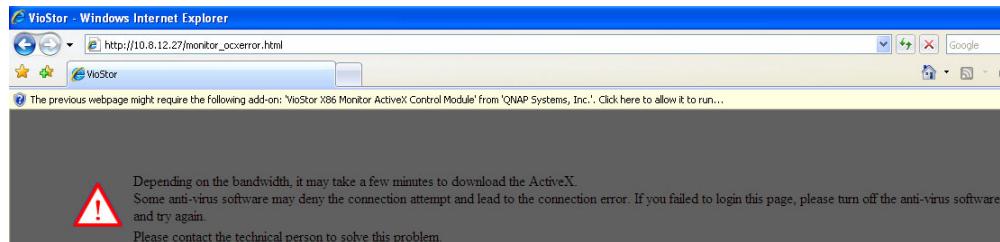
2. Enter the user name and password to login the VioStor.

Default User name: **admin***

Default Password: **admin**

* If you are using VS-201/ VS-101/ NVR-104, the login name is "administrator" and the login password is "admin".

3. To view the live video, you must install the ActiveX control. Follow the instructions to install it.



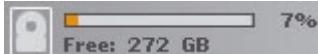
3.2 Monitoring Page

When you have successfully logged in the VioStor, the monitoring page is shown. Select the display language. You can start to configure the system settings and use the monitoring and recording functions of the server.



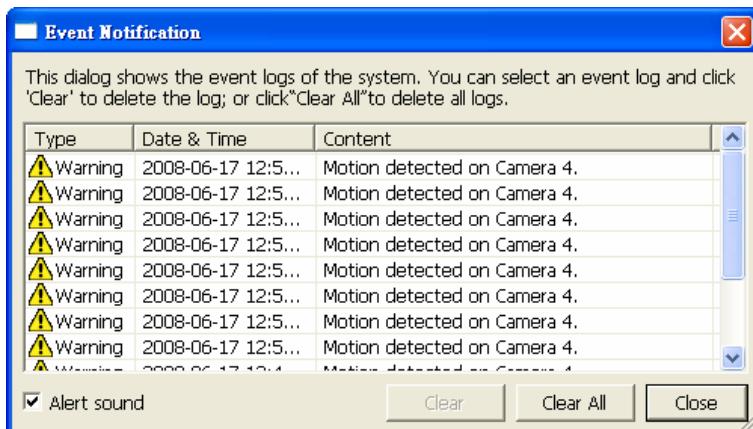
Icon	Description
	Multi display mode: The VioStor supports multi-display mode. (This function can only be used when the computer or the host is connected to multiple monitors.)
	Multi-server monitoring: Up to 120 channels from different NVR servers can be added for monitoring.
	Select language: Select the display language.
	E-map: Displays the location of the camera. The e-map can be changed in system configuration page.

	System configuration: Login the system administration page.
	Monitor settings: Configure the advanced settings of monitoring page. You can configure the source of video/ audio stream, event notification, and snapshot folder.
	Playback: Enter the recording playback page. The administrator can grant access right to the users.
	Help: View the system online help.
	Logout: Logout the VioStor.
	Snapshot: Take a snapshot on the selected camera. When the picture is shown, right click the picture to save it to the computer.
	Manual recording: Enable or disable manual recording on the selected camera. The administrator can enable or disable this option in the system configuration page.
	Audio (optional): Turn on/ off the audio support for the monitoring page.
	Login network camera homepage: Select a channel and click this button to go to the homepage of the selected IP camera.
	Event notification: When the alarm recording is enabled and an event is detected, this icon is shown. Click this icon to view the alert details.
	Digital zoom: Select a camera and click this button to enable the digital zoom function of the camera. (You can also right click the monitoring channel to enable this function.) Press and hold the left mouse button to zoom in or press and hold the right mouse button to zoom out. You can press the left mouse button to drag the viewing angle of the camera.

	You can also use the mouse wheel or the PTZ control panel to use the digital zoom function.
	Focus control: Focus control of the PTZ camera.
	Select PTZ camera preset positions: You can view different preset positions of the camera by clicking the number buttons. To configure the preset positions of the camera, please refer to the user manual of the camera.
	Recording storage status: Displays the storage percentage and the free space.

Note:

1. Starting and stopping manual recording will not affect the scheduled or alarm recording.
2. The default path for storing snapshots is the "Snapshot" folder under My Documents in your computer.
3. If the snapshot time is inconsistent with the actual time that the snapshot is taken, it is caused by the network environment but not a system error.
4. Click the event notification icon to view the event details, enable or disable the alert sound or clear the event logs.



5. When the digital zoom function is enabled on multiple cameras, the zooming function will be affected if your computer performance is not high enough.
6. Right click the monitoring channel on the live view page. The following functions are available depending on the camera model.
 - a. Connect to camera homepage.
 - b. Camera setting: Enter the camera configuration page.
 - c. PTZ: Pan/ Tilt/ Zoom camera control.
 - d. Preset: Select PTZ camera preset positions.

- e. Enable live tracking: Available on Panasonic NS202(A) camera.
- f. Disable live tracking: Available on Panasonic NS202(A) camera.
- g. Auto cruising: This feature is used to configure the PTZ cameras to cruise according to the preset positions and the staying time set for each preset position.
- h. Digital zoom: Enable/ disable digital zoom.
- i. Keep aspect ratio.

3.2.1 Live Video Window

If the IP camera is properly configured, you can see the current video from the remote IP camera.

If your camera supports pan and tilt functions, you can click on the video window directly to adjust the viewing angle. If the camera supports zooming, you can use a wheel mouse to adjust the zooming distance by scrolling the wheel. Please refer to the user manual of your camera for further information.

When you enable digital zoom, you can right click the camera and control the PTZ function. You can press and hold the left mouse button to zoom in or press and hold the right mouse button to zoom out, or press the left mouse button to drag the viewing angle of the camera.



Camera Status

The camera status is indicated by the icons shown below:

Icon	Camera Status
	Scheduled or continuous recording is in process
	This IP camera supports audio function
	This IP camera supports PT function
	Manual recording is enabled
	The recording triggered by advanced event management ("Camera Settings" > "Alarm Settings" > "Advanced Mode") is in process
	The alarm input 1 of the IP camera is triggered and recording is in process
	The alarm input 2 of the IP camera is triggered and recording is in process
	The alarm input 3 of the IP camera is triggered and recording is in process
	Motion detection recording is in process
	Digital zoom is enabled

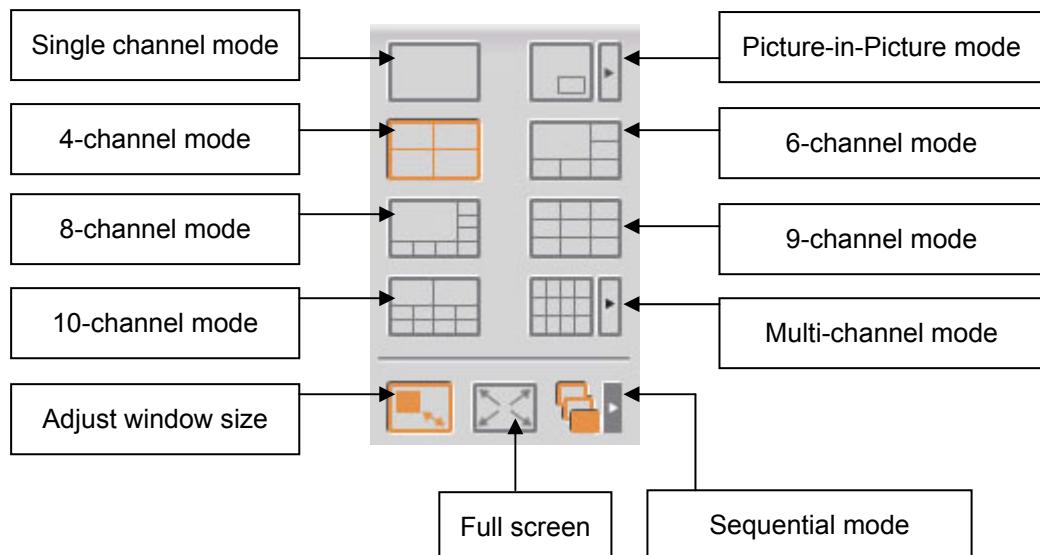
Connection Message

When the NVR fails to display an IP camera, a message will be shown within the live video window. The following messages may be shown:

- Connecting
If the IP camera is located in remote network or Internet, it may take some time to establish connection to the camera.
- Disconnected
The system cannot connect to the IP camera. Please check the network connection of your computer and the availability of the IP camera. If the camera is installed on the Internet, the port for the camera must be opened on your router or gateway.
- No Permission
This message is shown when a user without access right to view this camera. Please logout the system and login as a user with the access right to the camera.
- Server Error
Please check the camera settings or update camera's firmware to newer version. Contact the technical support if the problem is not fixed after checking.

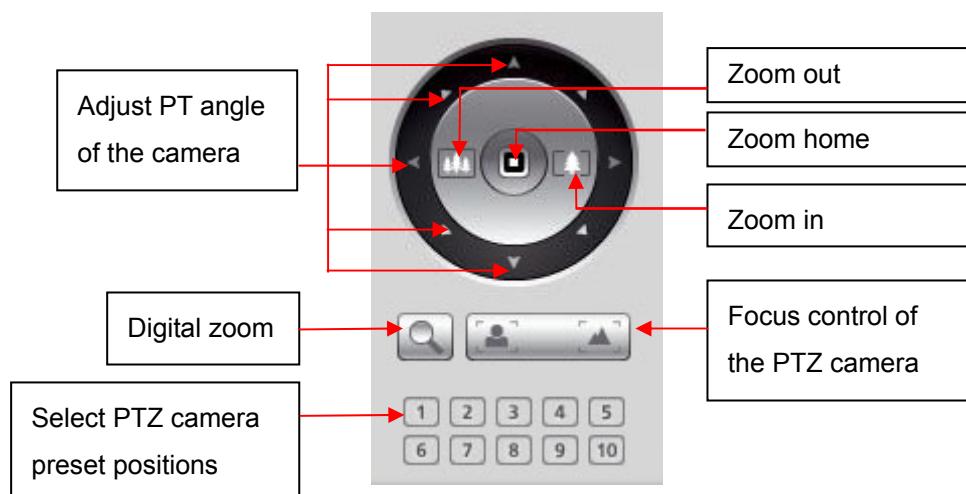
3.2.2 Display Mode

By changing the display mode, you can adjust the visual effects when viewing video of single or multiple cameras.



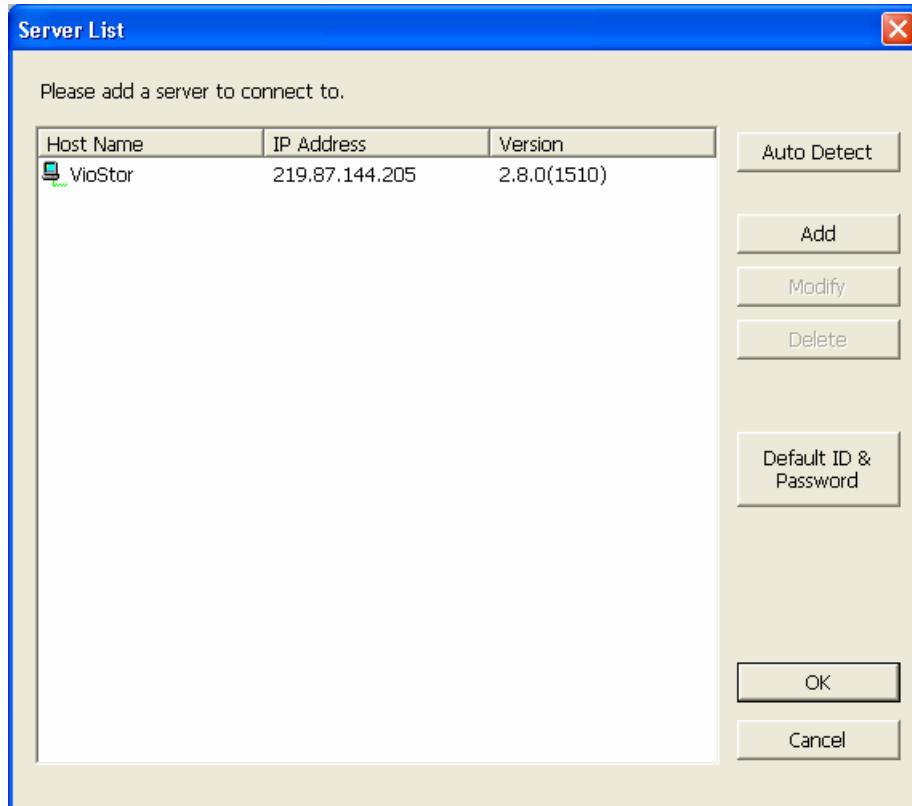
3.2.3 PTZ Camera Control Panel

PTZ stands for Pan/ Tilt/ Zoom camera control. You can do PTZ control on the selected camera. These functions are available depending on the camera model; please refer to the user manual of the camera. The digital zoom function cannot be used with the PTZ function at the same time.



3.2.4 Multi-server Monitoring

1. Click "Server List"  on the live view page.



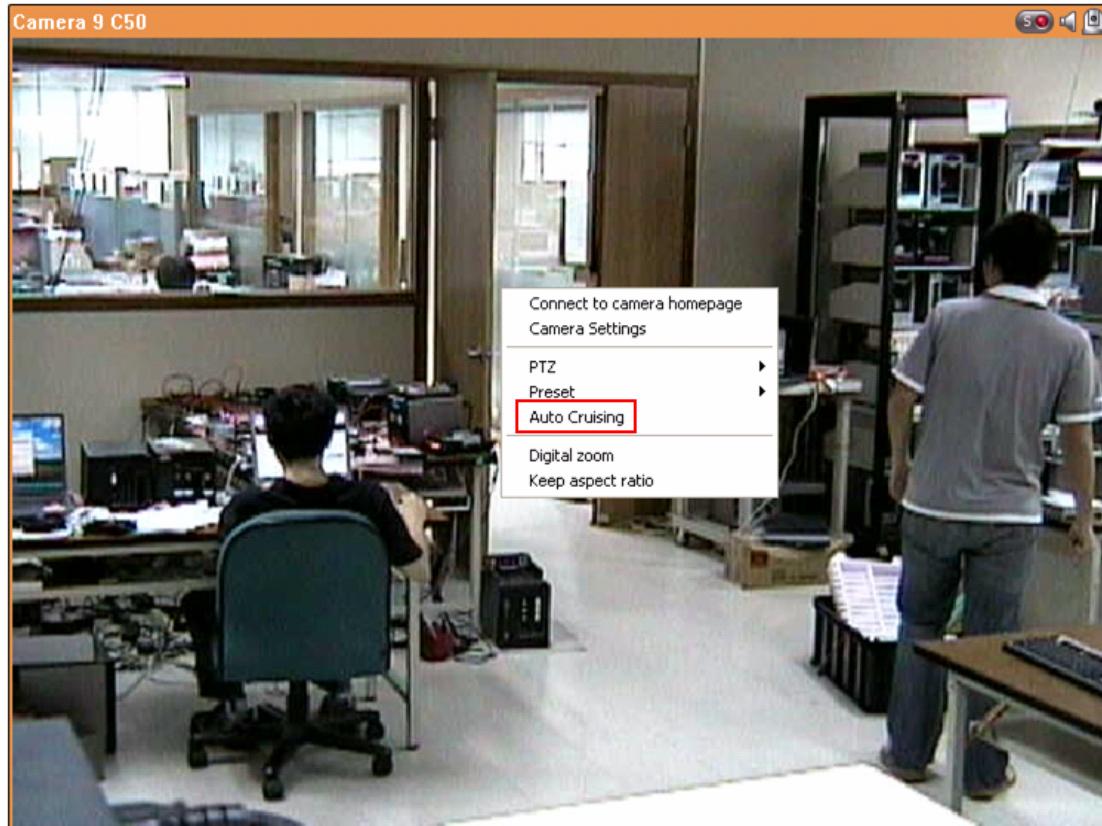
- a. Click "Auto Detect" to search for the QNAP NVR in the LAN and add the server to the server list.
- b. Click "Add" to add the QNAP NVR to the server list.
2. Up to 120 channels from different NVR servers can be added for monitoring.

3.2.5 Auto Cruising

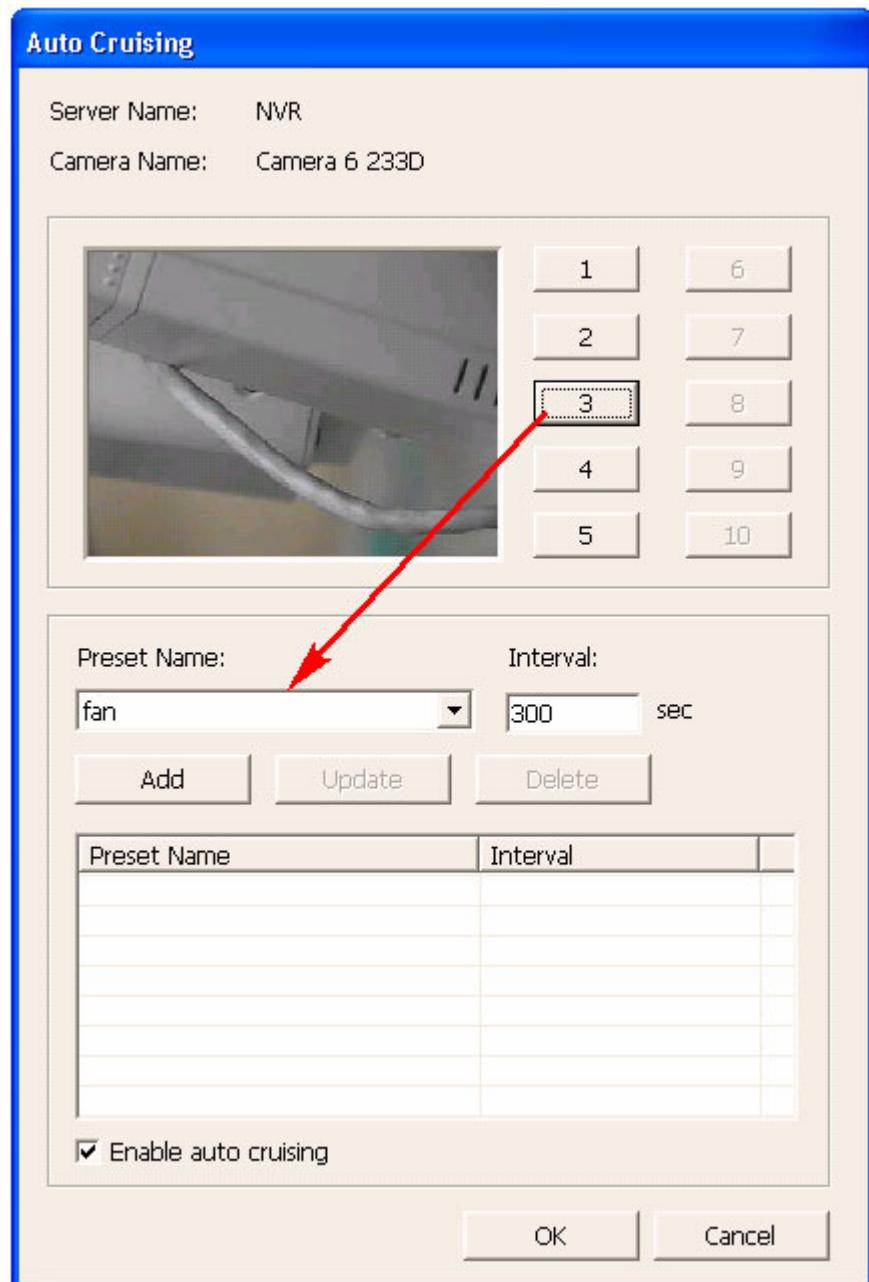
The auto cruising feature of the VioStor NVR is used to configure the PTZ cameras to cruise according to the preset positions and the staying time set for each preset position.

To use the auto cruising feature, follow the steps below.

1. On the monitoring page of the VioStor NVR, click  to go to the configuration page of the PTZ camera.
2. Set the preset positions on the PTZ camera.
3. Return to the monitoring page of the VioStor NVR. Right click the display of the PTZ camera. Select "Auto Cruising".



4. Click the number buttons to view the preset positions of the PTZ camera. When you click the button, the name of the corresponding preset position is shown on the “Preset Name” drop down menu.



5. Add: To add a setting for auto cruising, select the “Preset Name” from the drop down menu and enter the staying time (interval, in seconds). Click “Add”.

Preset Name:	Interval:				
<input type="text" value="fan"/>	<input type="text" value="5"/> sec				
<input type="button" value="Add"/>	<input type="button" value="Update"/>	<input type="button" value="Delete"/>			
<table border="1"> <thead> <tr> <th>Preset Name</th> <th>Interval</th> </tr> </thead> <tbody> <tr> <td>fan</td> <td>5</td> </tr> </tbody> </table>		Preset Name	Interval	fan	5
Preset Name	Interval				
fan	5				

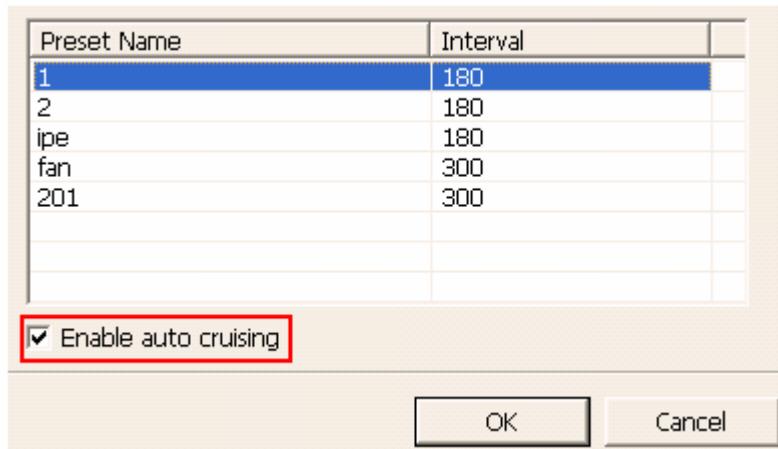
6. Update: To change a setting on the list, highlight the selection. Select another preset position from the drop down menu and/or change the staying time (interval). Click “Update”.

Preset Name:	Interval:				
<input type="text" value="ipe"/>	<input type="text" value="100"/> sec				
<input type="button" value="Add"/>	<input type="button" value="Update"/>	<input type="button" value="Delete"/>			
<table border="1"> <thead> <tr> <th>Preset Name</th> <th>Interval</th> </tr> </thead> <tbody> <tr> <td>fan</td> <td>5</td> </tr> </tbody> </table>		Preset Name	Interval	fan	5
Preset Name	Interval				
fan	5				
<table border="1"> <thead> <tr> <th>Preset Name</th> <th>Interval</th> </tr> </thead> <tbody> <tr> <td>ipe</td> <td>100</td> </tr> </tbody> </table>		Preset Name	Interval	ipe	100
Preset Name	Interval				
ipe	100				

7. Delete: To delete a setting, highlight a selection on the list and click “Delete”. To delete more than one setting, press and hold the Ctrl key and click the settings. Then click “Delete”.

Preset Name:	Interval:								
<input type="text" value="201"/>	<input type="text" value="30"/> sec								
<input type="button" value="Add"/>	<input type="button" value="Update"/>	<input type="button" value="Delete"/>							
<table border="1"> <thead> <tr> <th>Preset Name</th> <th>Interval</th> </tr> </thead> <tbody> <tr> <td>fan</td> <td>5</td> </tr> <tr> <td>ipe</td> <td>100</td> </tr> <tr> <td>201</td> <td>30</td> </tr> </tbody> </table>		Preset Name	Interval	fan	5	ipe	100	201	30
Preset Name	Interval								
fan	5								
ipe	100								
201	30								

8. After configuring the auto cruising settings, check the box "Enable auto cruising" and click "OK". The system will start auto cruising according to the settings.



Note:

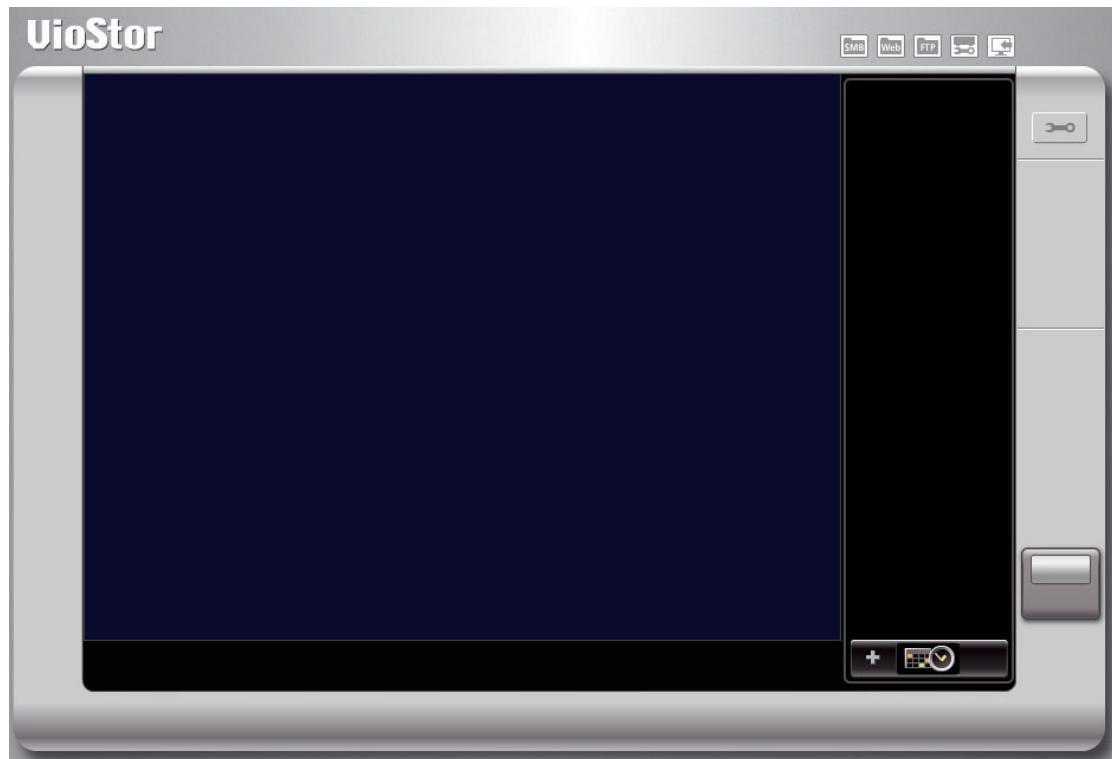
- 1) The default staying time (interval) of the preset position is 5 seconds. You can enter 5-999 seconds for this setting.
- 2) The system supports up to 10 preset positions (the first 10) configured on the PTZ cameras. You can configure up to 20 settings for auto cruising on the NVR. In other words, the NVR supports maximum 10 selections on the drop down menu and 20 settings on the auto cruising list.

Chapter 4. Playback the Video Files

The VioStor provides an intuitive web interface to search and play recording files, no extra software installation is necessary. In addition, you can use network file services to access the recorded video files directly.

4.1 Use the Web Playback Interface (VioStor Player)

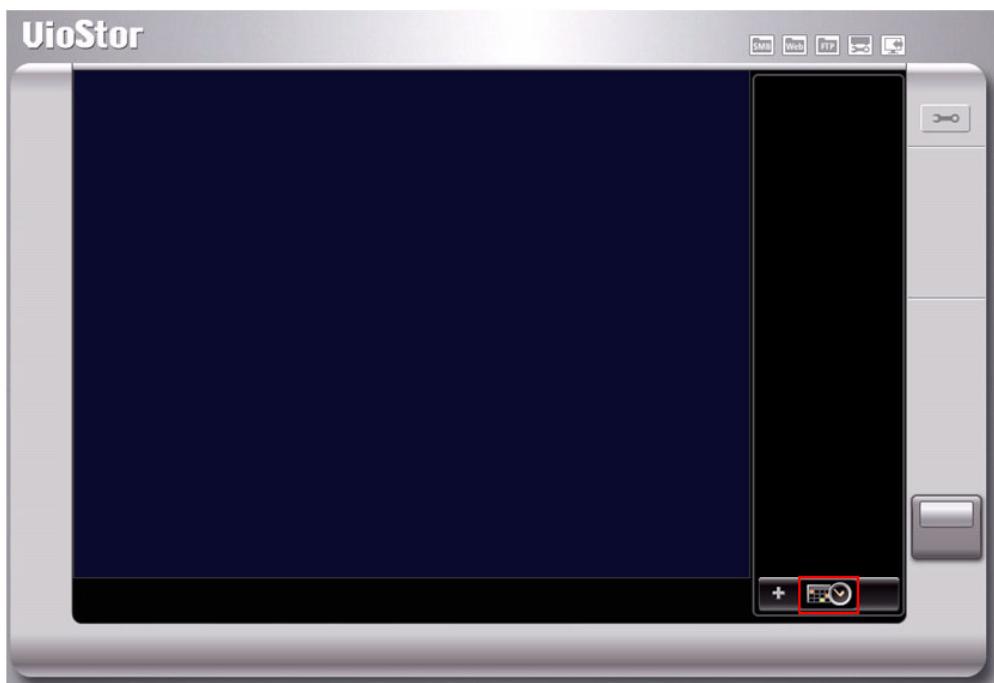
1. Click the playback button  on the monitoring page.
2. VioStor Player will be shown. You can use this program to search and play the recording files on the NVR servers. To return to the monitoring page, click . To enter the system administration page, click .



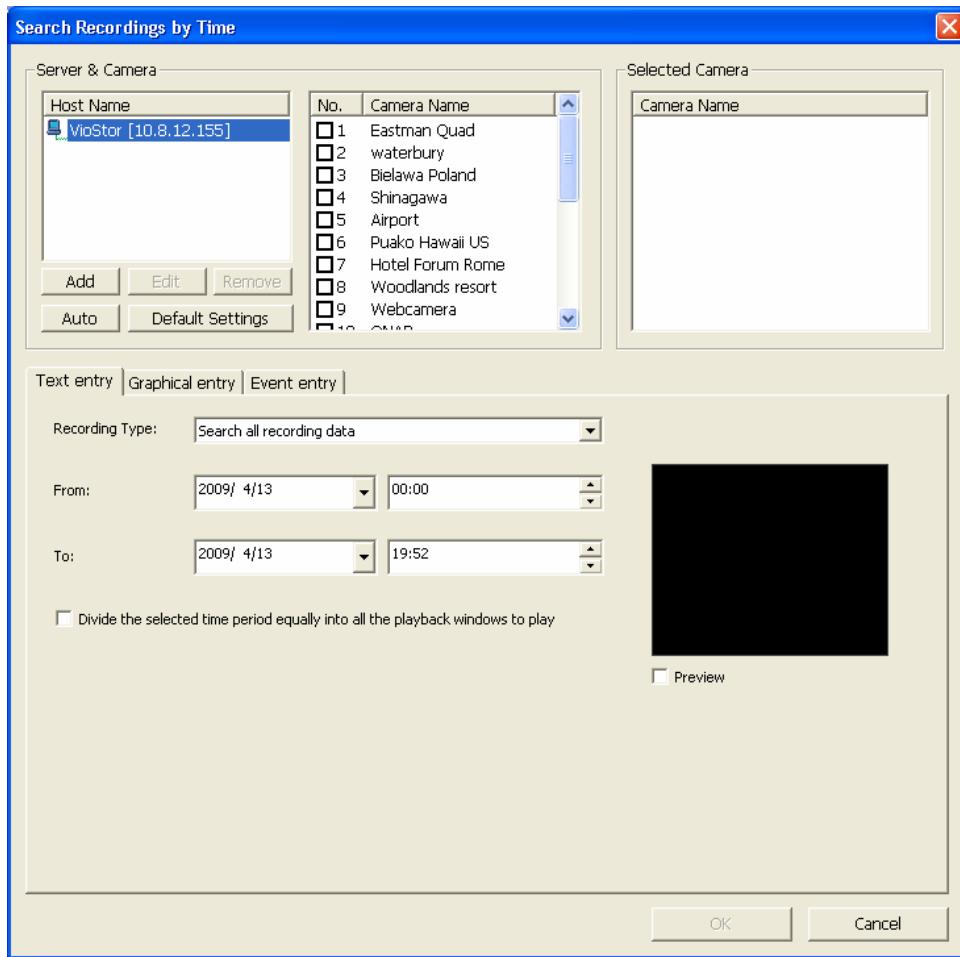
Note: If you do not have access authority of the cameras, you will not be able to get the recording file list and play the video recordings of the cameras. Please refer to [Chapter 5.5](#) for access right configuration.

4.1.1 Connect to Server for Playback

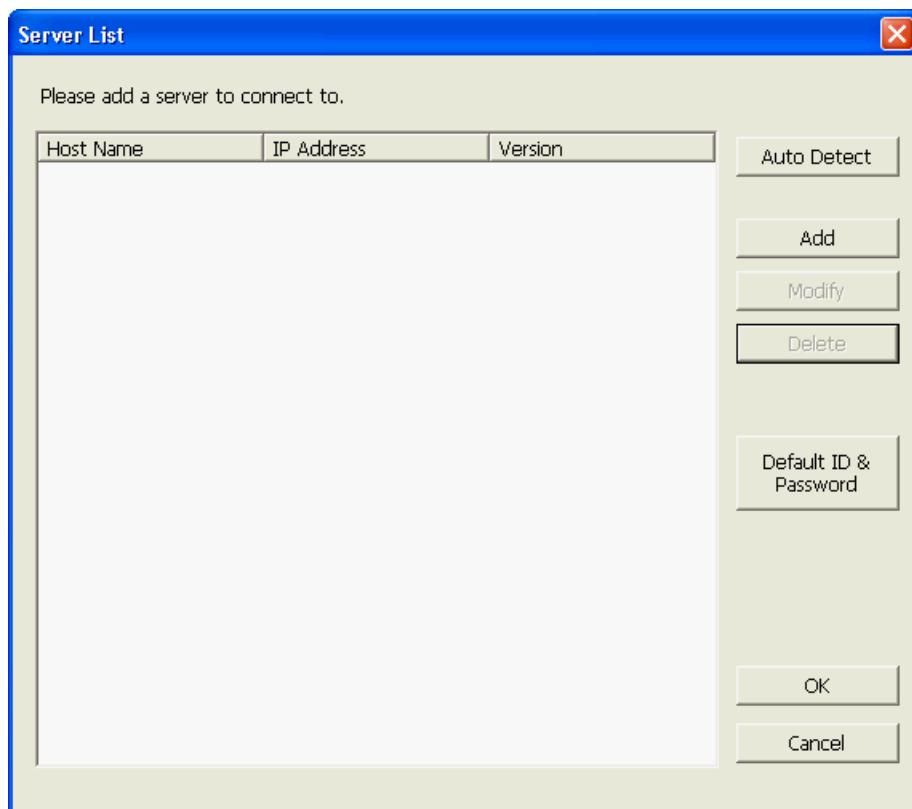
1. Click "Play by Time" .



2. The following dialog will be shown.



3. Configure servers:
 - a. Add: Add a server.
 - b. Modify: Modify a server.
 - c. Remove: Remove a server.
 - d. Auto: Auto-search servers.
 - e. Default settings: Enter the default user name and password for all newly added servers.

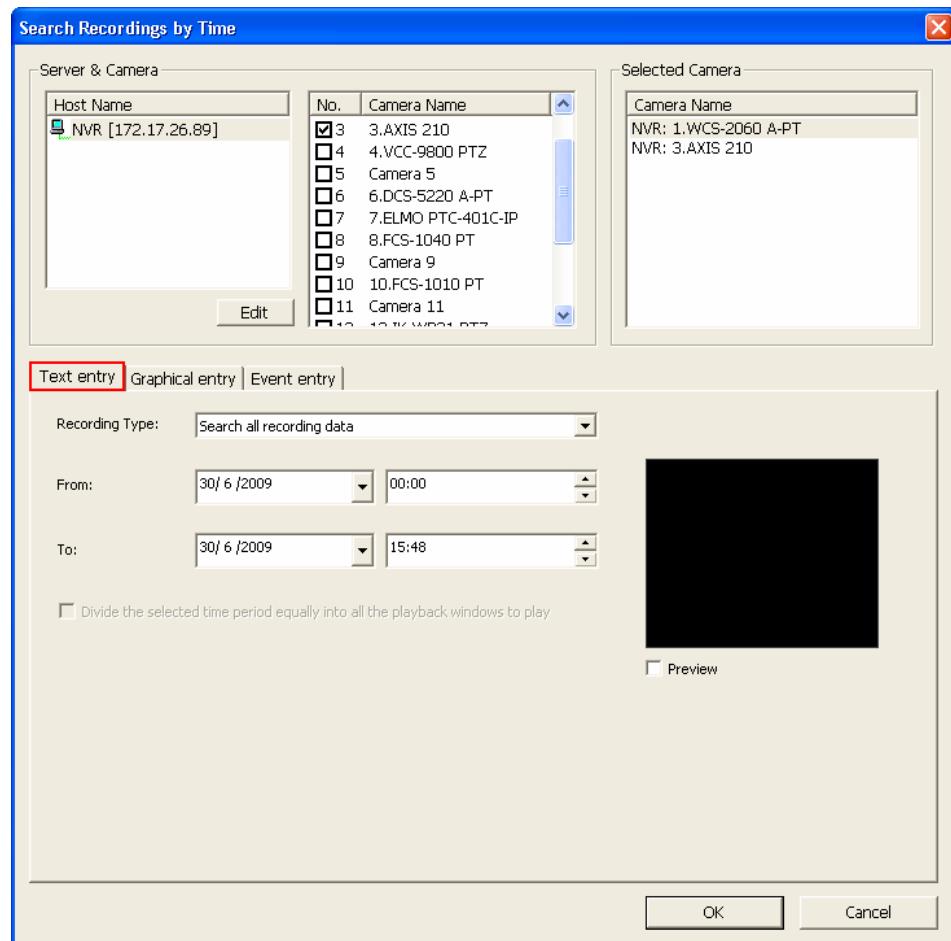


4. Select the data search mode.

- **Date and time search (Text entry)**

- Select the NVR server(s) and the IP camera(s)*.
- Click the "Text entry" tab.
- Select the recording type, the start and end time when the video is recorded.
- Click "Preview" to preview the searched video.
- Click "OK".

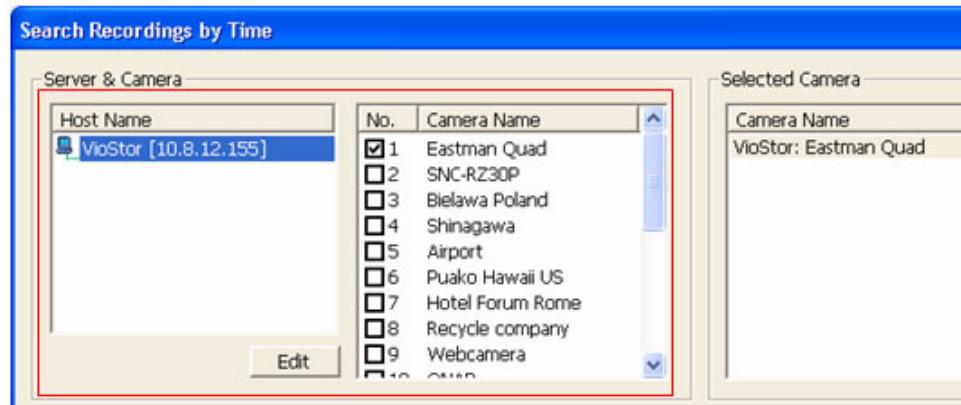
* You can select 4 IP cameras at maximum.



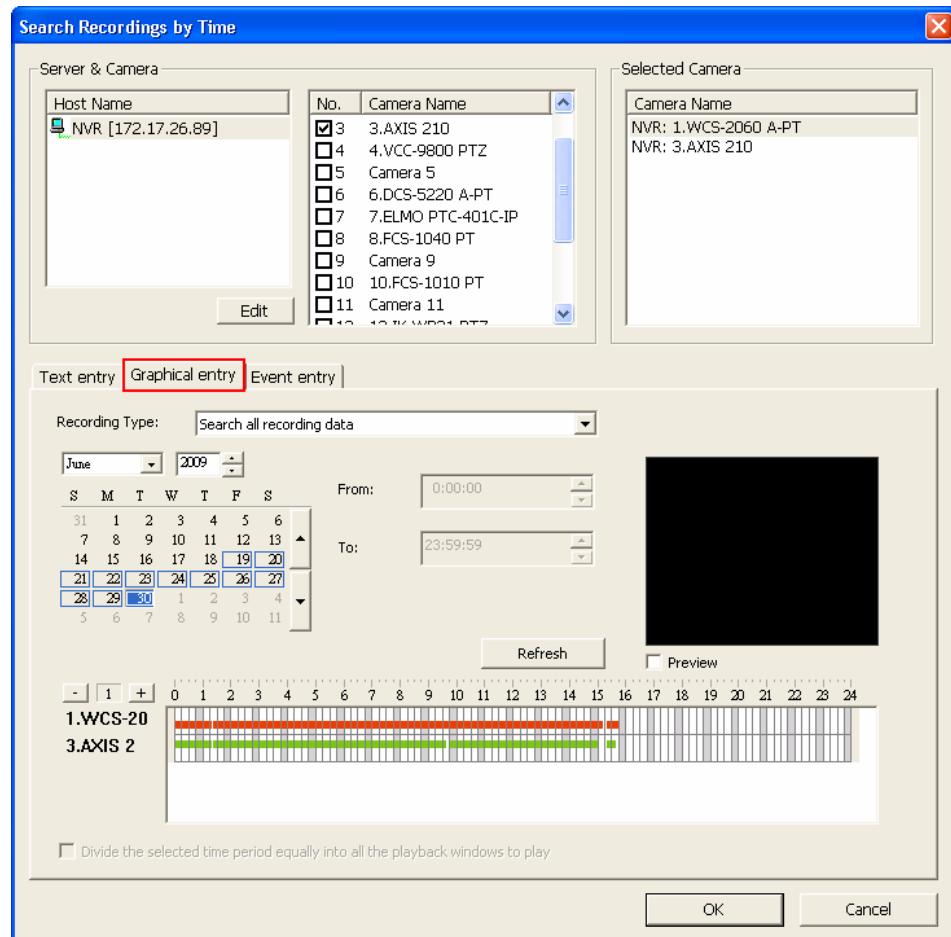
- **Timeline search**

- Select the server(s) and the IP camera(s)*.

* You can select 4 IP cameras at maximum.



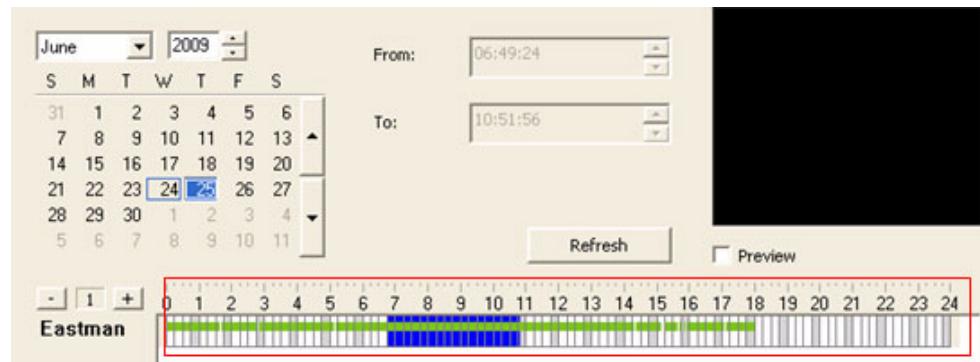
- Click the "Graphical entry" tab.



iii. Select the recording type.



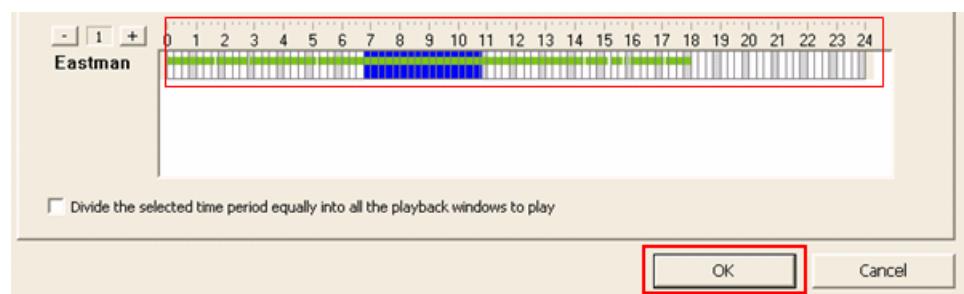
iv. Specify the time range when the files are recorded. The settings will be applied to all the cameras selected.



v. Click "Preview" to preview the searched video.



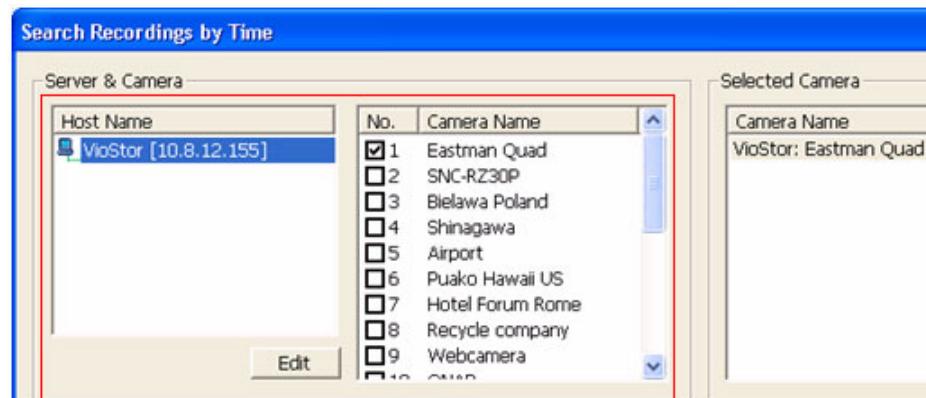
vi. Click "OK".



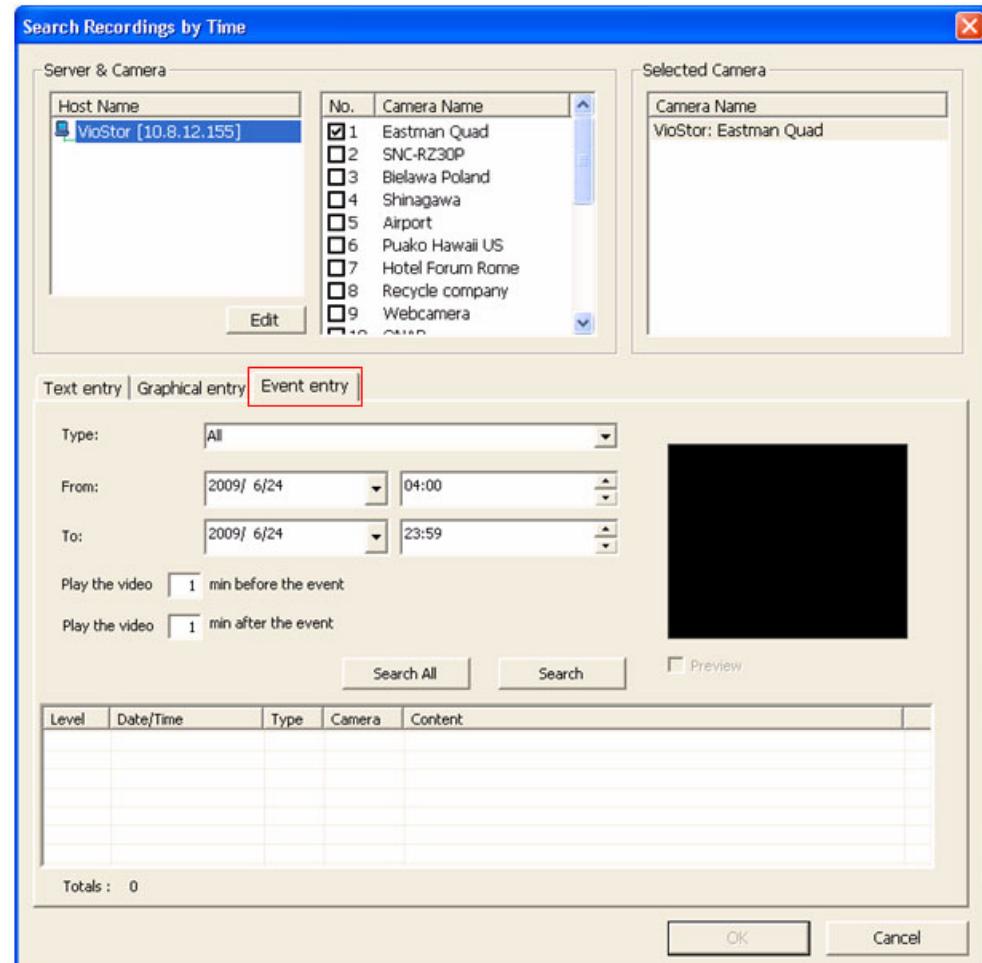
- **Event entry**

- >Select the server(s) and the IP camera(s)*.

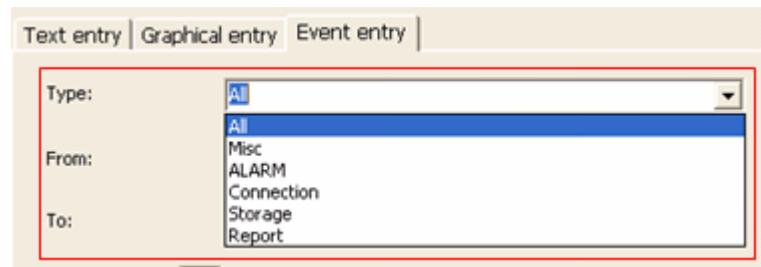
* You can select 4 IP cameras at maximum.



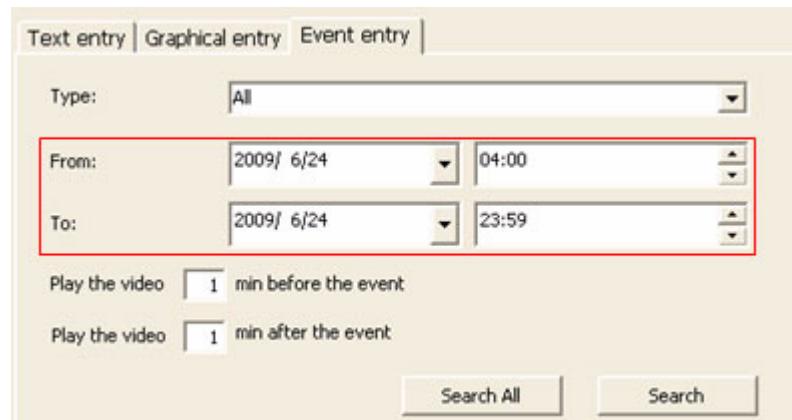
- Click the "Event entry" tab.



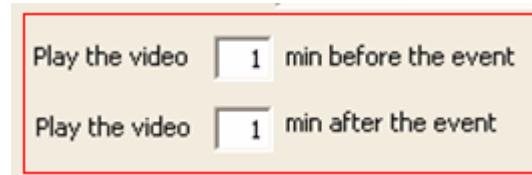
iii. Select the event type.



iv. Specify the time range when the files are recorded.



v. Specify the number of minutes for playing the video recorded before and after the event.



vi. Event search. This function is provided for you to search all the events occurred on the IP cameras. You may refer to the event details to search for the recording data.

- ✓ Search all: Search for the specified events occurred on all the IP cameras of an NVR within the time range specified.
- ✓ Search: Search for the specified events occurred on one IP camera within the time range specified.

Type: All

From: 24/6/2009 00:00

To: 24/6/2009 23:59

Play the video 1 min before the event

Play the video 1 min after the event

Search All

Search

vii. The events will be shown. Click "OK".

Level	Date/Time	Type	Camera	Content
Inform...	2009-07-14 00:00:23	Misc	4	Set video quality on Camera 4 failed due to authentication failure.
Inform...	2009-07-14 00:02:17	Misc	11	Set video quality on Camera 11 failed due to authentication failure.
Inform...	2009-07-14 00:02:18	Misc	17	Set video quality on Camera 17 failed due to authentication failure.
Inform...	2009-07-14 00:02:24	Misc	13	Set video quality on Camera 13 failed due to authentication failure.
Inform...	2009-07-14 00:04:45	Misc	12	Set video quality on Camera 12 failed due to authentication failure.
Inform...	2009-07-14 00:05:02	Report	1	Recording report for Camera 1 on 2009-07-13: Total size of regular recor...
Inform...	2009-07-14 00:05:02	Report	2	Recording report for Camera 2 on 2009-07-13: Total size of regular recor...

Totals : 612

OK Cancel

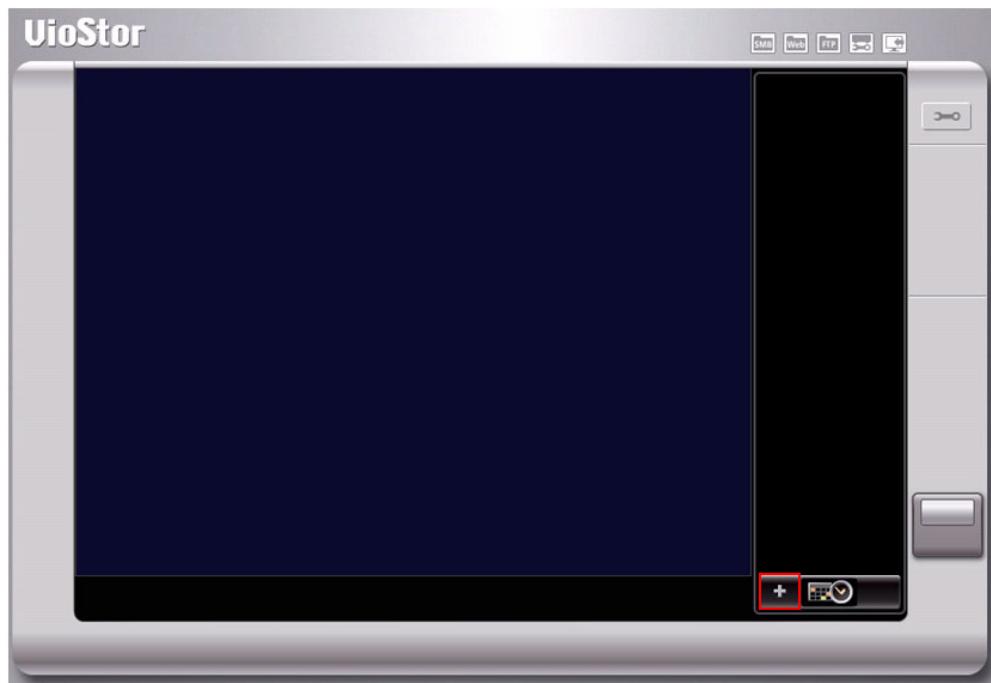
- When the files are shown, you can play the video.



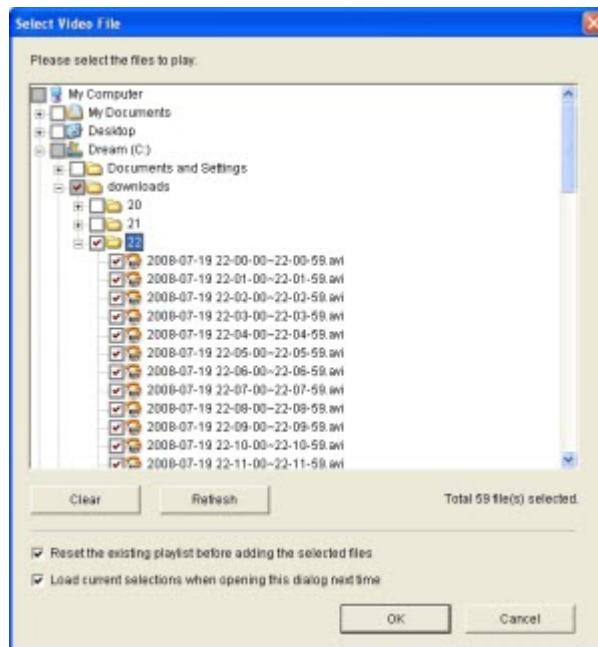
Note: The regular recordings are shown in white while the alarm recordings are shown in red on the playlist.

4.1.2 Play Video Files from Your Computer

1. Click "Add files" .



2. Browse and select the files.



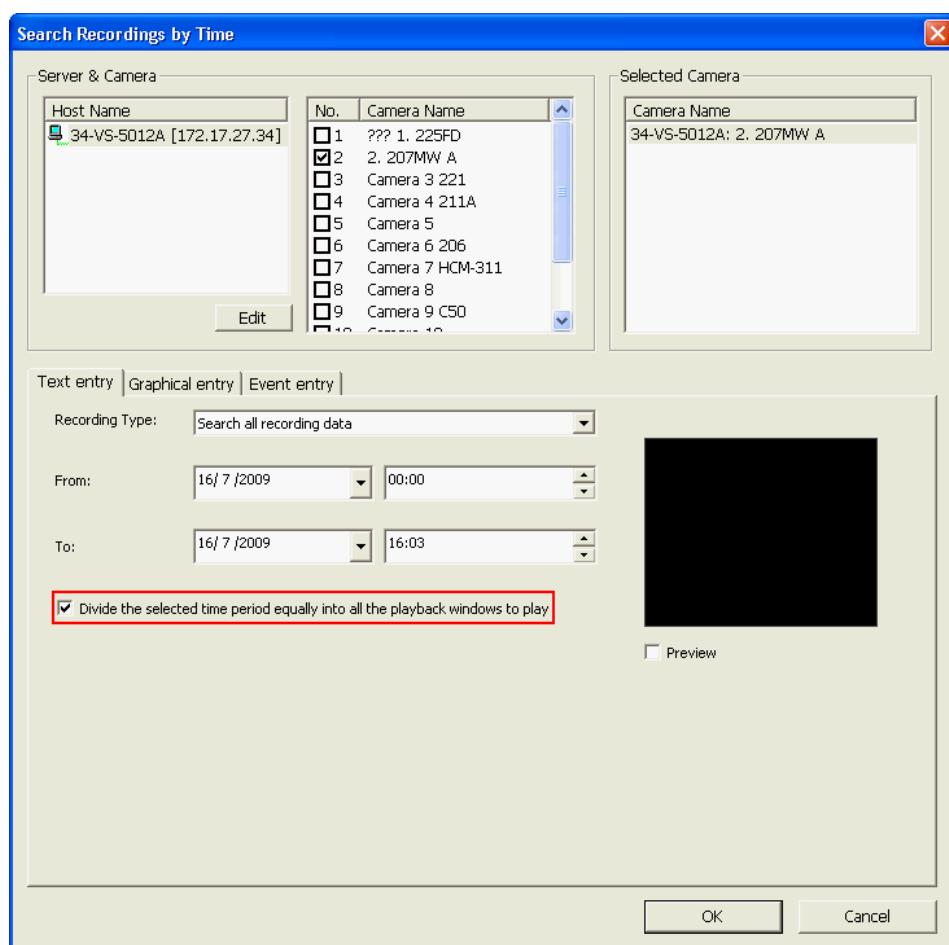
3. The playlist will be shown. Click "Play"  to start playing.

4.1.3 Quad-view Playback

Quad-view playback allows you to search for the video recorded by the NVR servers quickly. You can view the video of four IP cameras simultaneously or select to divide the video of one IP camera into four time periods and play them in a quad-view window.

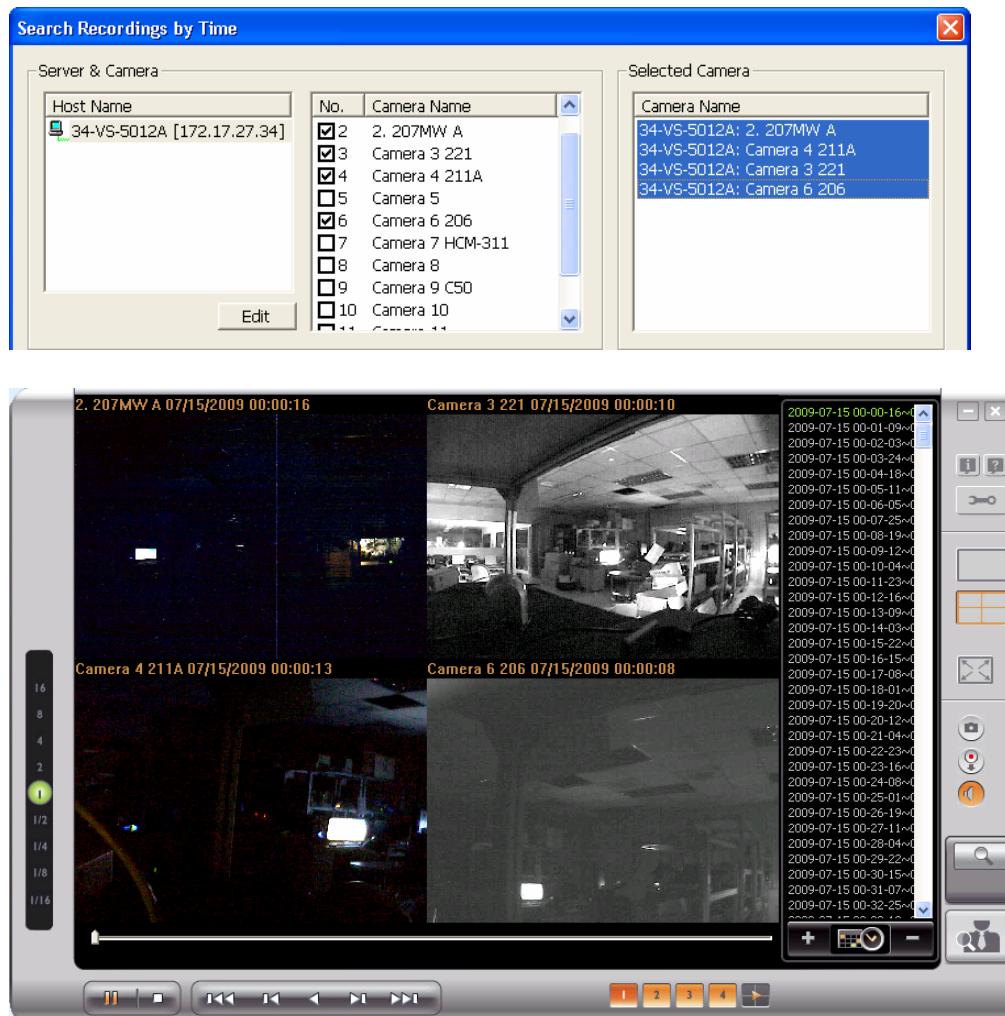
✓ **Divide the selected time equally into four playback windows**

Select only one camera. Click "Text entry" or "Graphical entry". Enter the search criteria and check the option "Divide the selected time period equally into all the playback windows to play". Click "OK".



✓ **Play the video of four IP cameras**

Select four IP cameras for video search. Enter the search criteria in "Text entry" or "Graphical entry". When the search results are shown, you can play the video files of the four IP cameras simultaneously.



4.1.4 Intelligent Video Analytics (IVA)

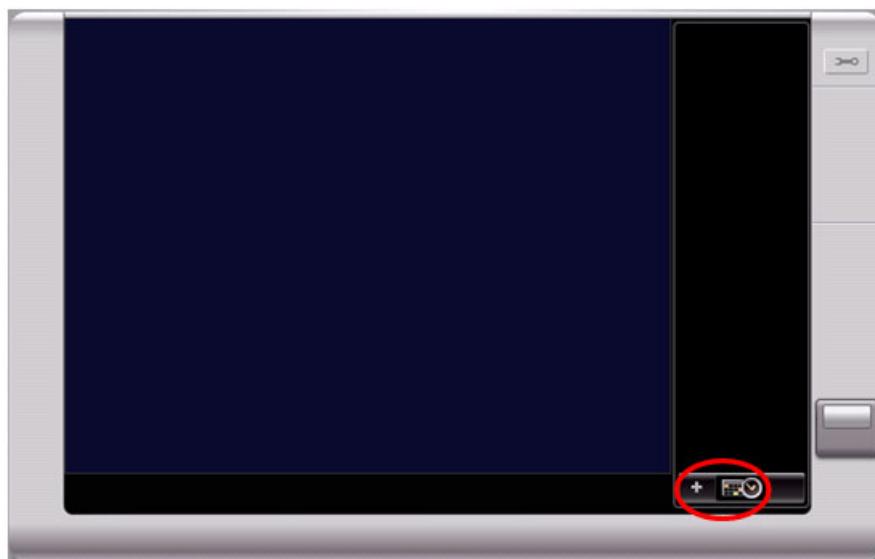
QNAP NVR supports intelligent video analytics to allow the users to search the video files efficiently. The time and effort for video search are largely reduced.

The following features are supported for video analytics:

- ✓ Motion detection: Detects movement of objects in the video.
- ✓ Foreign object: Detects new object in the video.
- ✓ Missing object: Detects missing object in the video.
- ✓ Out of focus: Detects out of focus of the camera in the video.
- ✓ Camera occlusion: Detects if the IP camera is obstructed.

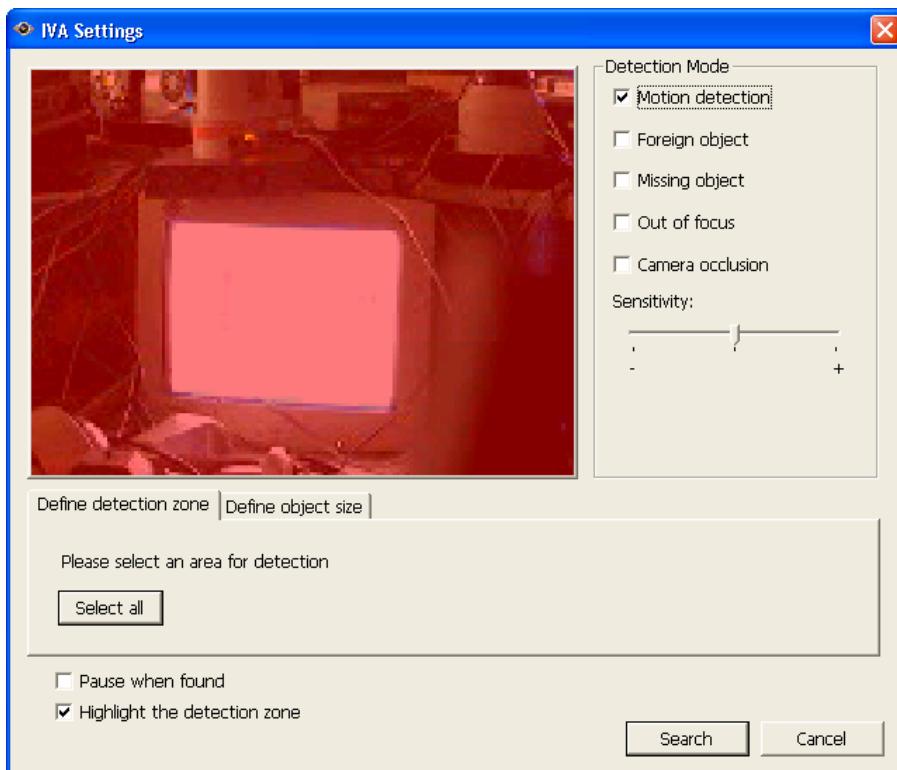
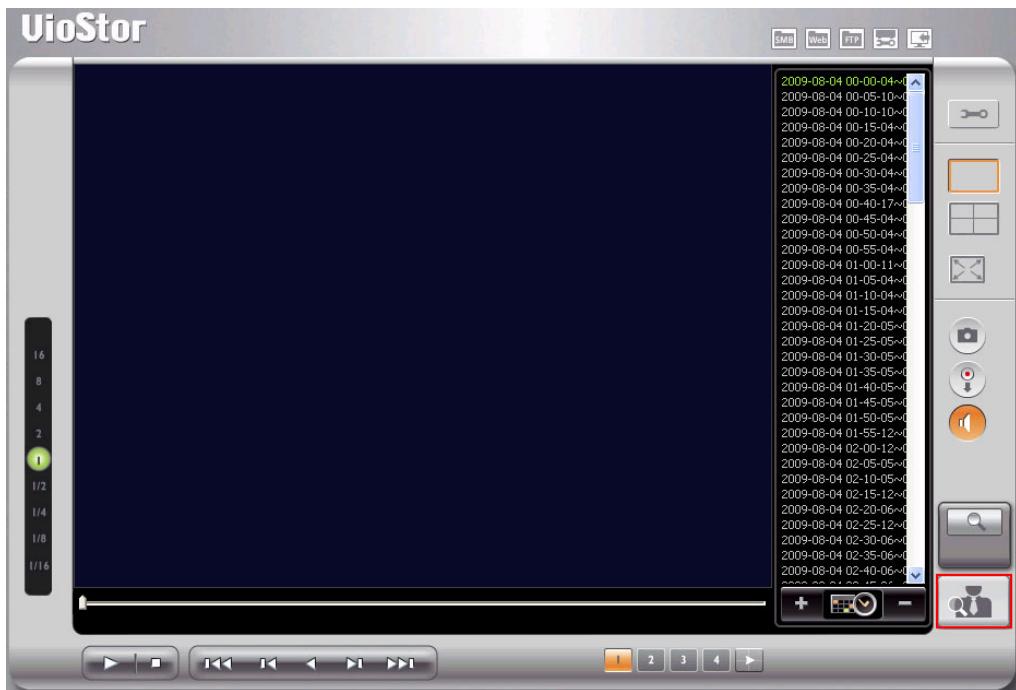
To use this function, follow the steps below:

1. Go to Playback page of the NVR. Add files to the playlist.



Note: Intelligent video analytics support video search on one channel only.

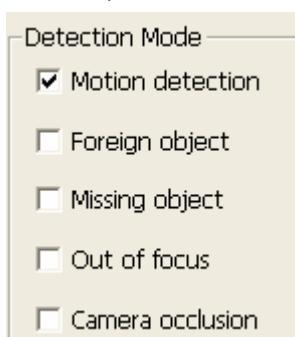
2. On the playback window, click .



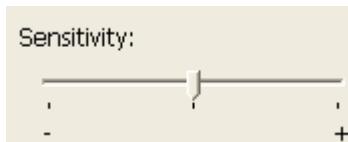
Note:

- ✓ When you check the option "Pause when found", the data search stops when a video file which matches the search criteria is found.
- ✓ When you enable "Highlight the detection zone", the moving objects will be highlighted in red brackets; the foreign or missing objects will be highlighted in yellow brackets; out of focus and camera occlusion will be displayed in transparent red.

3. Select the detection mode: motion detection, foreign object, missing object, out of focus, or camera occlusion. You can select multiple options.

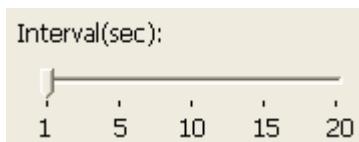


4. Adjust the sensitivity for object detection.

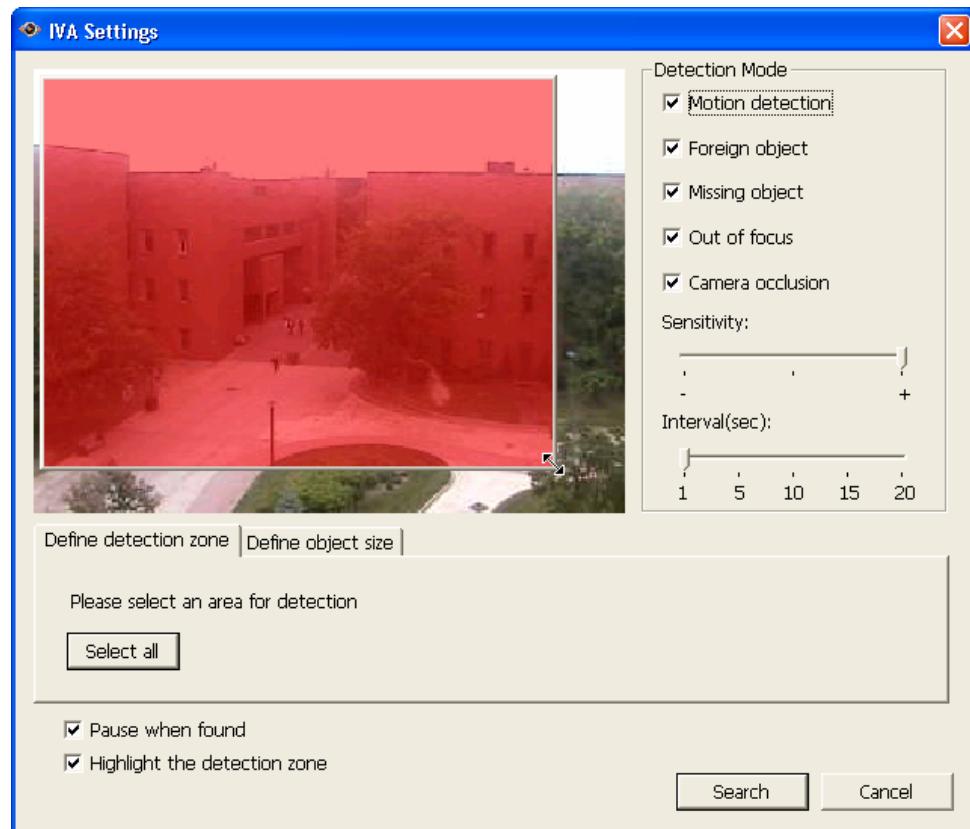


5. Adjust the time interval for foreign object and missing object. If a foreign object appears or a missing object disappears for a time period longer than the time interval, the system will record an event.

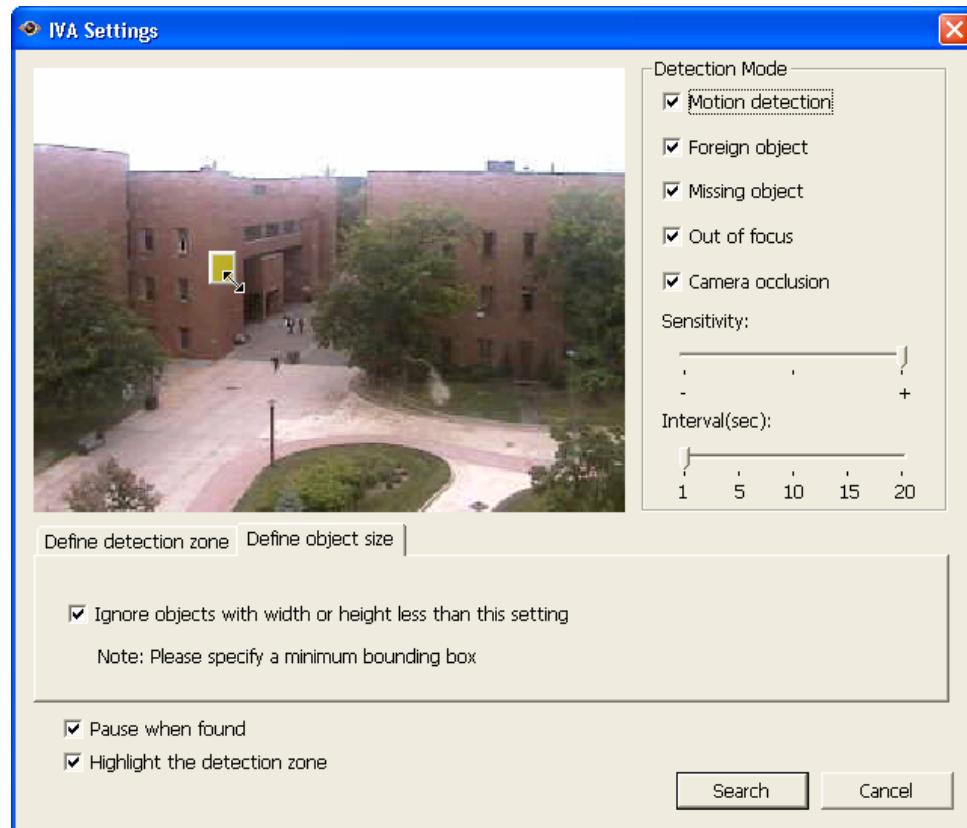
Note: The interval slide bar appears only when "foreign object" or "missing object" is checked.



6. Define detection zone. Mouse over the edge of the red zone and use the mouse to define the detection zone. Click "Select all" to highlight all the area for detection.

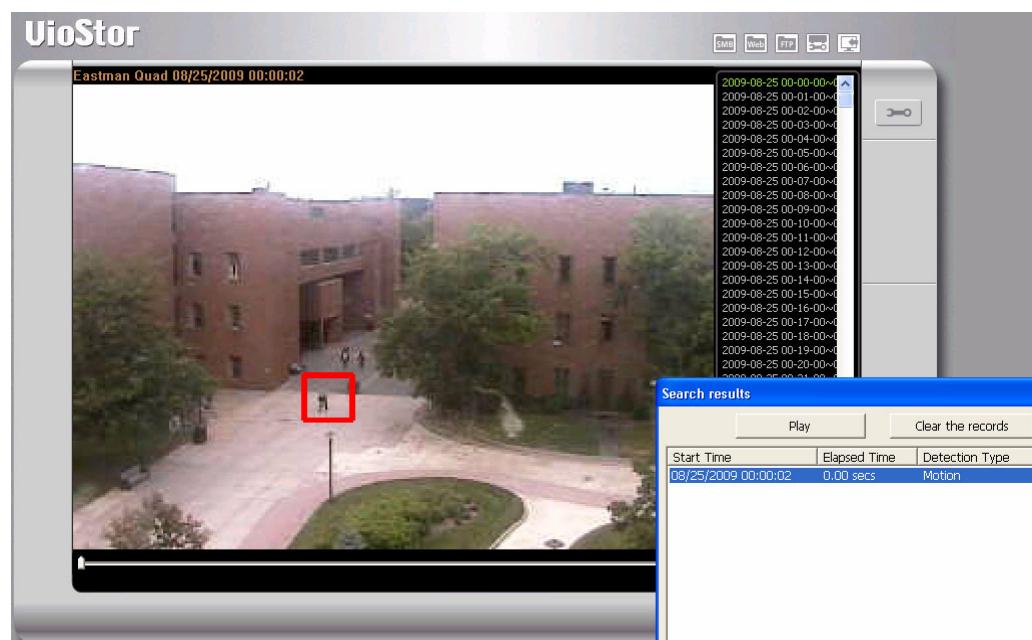
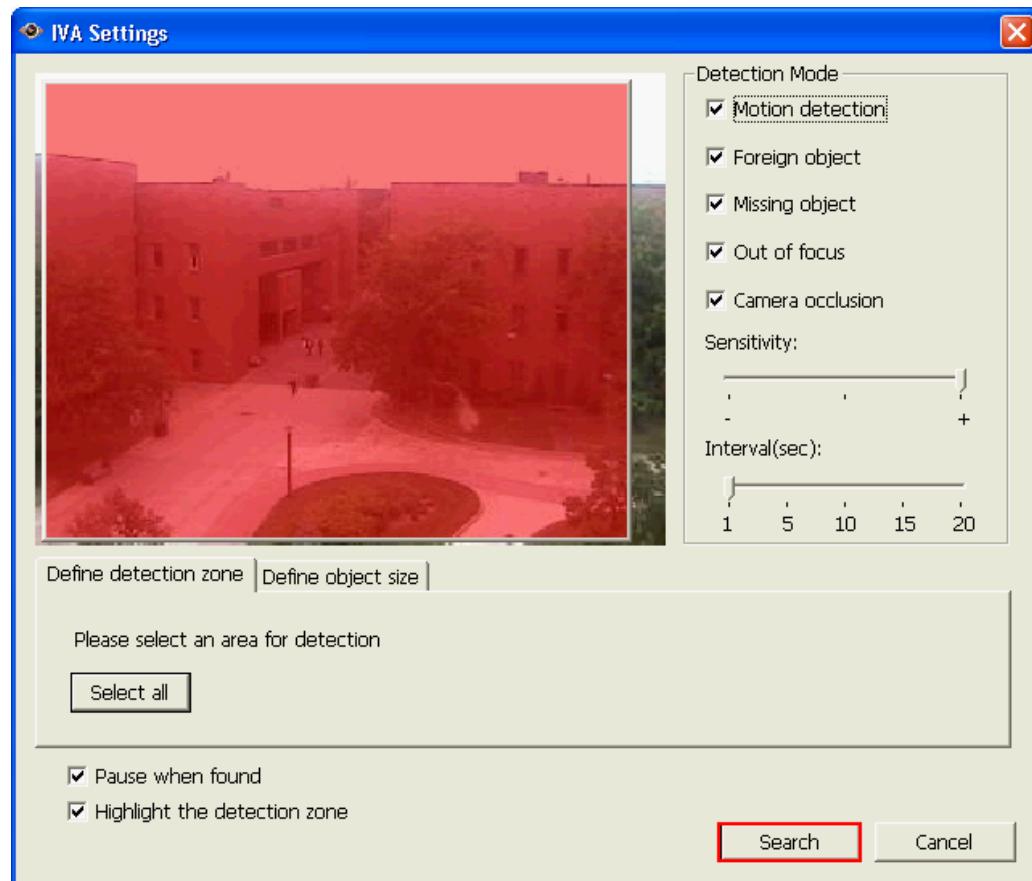


7. Define object size for the detection. You can use the mouse to drag the yellow zone to highlight the minimum object size for detection.



Note: After enabling this option, all the objects smaller than the yellow zone will be ignored for detection.

8. Click "Search" to start searching the video by IVA. The results will be shown.



Note:

- You can double click an entry on the search result dialog to play the video. The player will play the video starting from 15 seconds before the event to 15 seconds after the event.
- You can also right click an entry on the search result dialog to export the video and save it on your computer. The exported video starts from 15 seconds before the event to 15 seconds after the event.

4.2 Digital Watermarking

The VioStor NVR supports digital watermarking to protect the videos and snapshots from unauthorized modification. You can select to add digital watermark on the exported video and snapshot on the VioStor Player. A permanent digital signal will be added to the exported files which are selected for digital watermarking. The watermark cannot be removed and is only visible by using watermark proof software.

4.2.1 Export Files with Digital Watermark

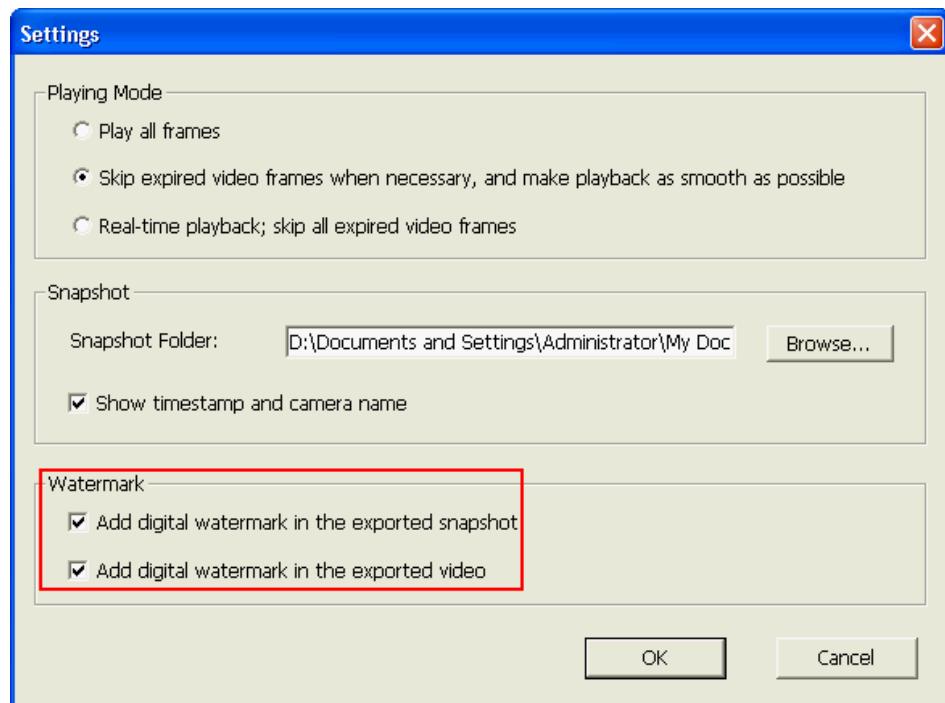
To use digital watermarking by VioStor Player, follow the steps below.

1. Click "Playback" to open the VioStor Player.

2. Click "Settings" .



3. Select to add digital watermark in the exported snapshot or video.



4. Select the recording files (refer to [Chapter 4](#)).

5. Click  to convert the video files into avi format and enter the file name.



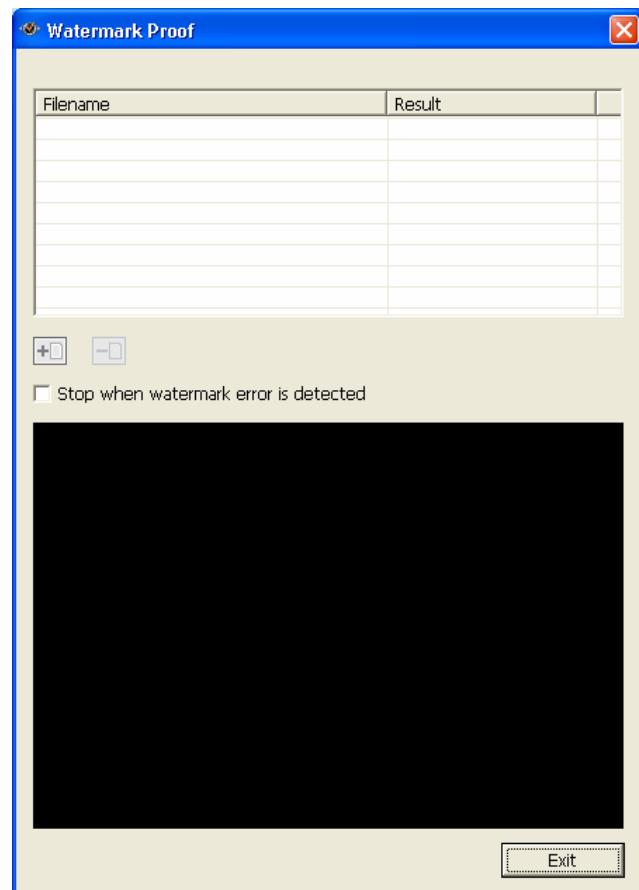
6. Click  to start playing and exporting the files.

Note: When you click  again, the NVR will stop exporting the files and resume to playback mode.

4.2.2 Watermark Proof

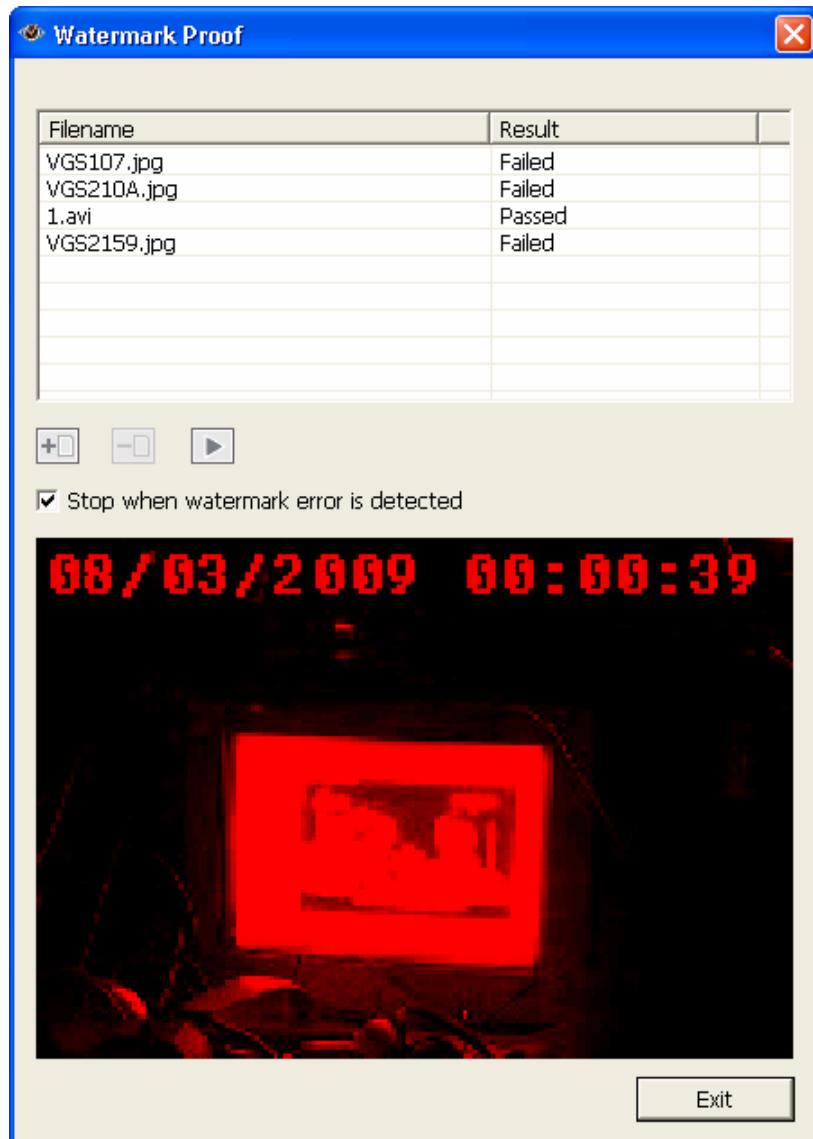
After installing the VioStor Player, Watermark Proof will be installed. From the Windows Start menu, select “All Programs” > “QNAP” > “Player” to locate “Watermark Proof”.

Run Watermark Proof. The following window will be shown.



Click  to browse and locate the files. You can select more than one file at one time.

Click  to start checking the files. The Watermark Proof will start checking the files and show the proof result. If you check the option "Stop when watermark error is detected", the checking procedure will stop if a failed file is detected. Otherwise the program will check all the files you have selected. If a file is modified, the proof result will be shown as "Failed".



4.3 Access the Recording Data

You can access the recording data on the VioStor by the following network services:

- Windows Network Neighborhood (SMB/CIFS)
- Web File Manager (HTTP)
- FTP Server (FTP)



Note:

- To access the video file by these protocols, you must enter the user name and password with the administrator access right.
- To be able to use these services, enable the files services in "Network Settings" > "File Services" in the system administration page.

Network Settings

- TCP/IP Configuration
- DDNS Service
- **File Services**
- Host Access Control
- Protocol Management
- View Network Settings

- Microsoft SMB/CIFS File Service
 Enable SMB/CIFS File Service

- Web File Manager
 Enable Web File Manager

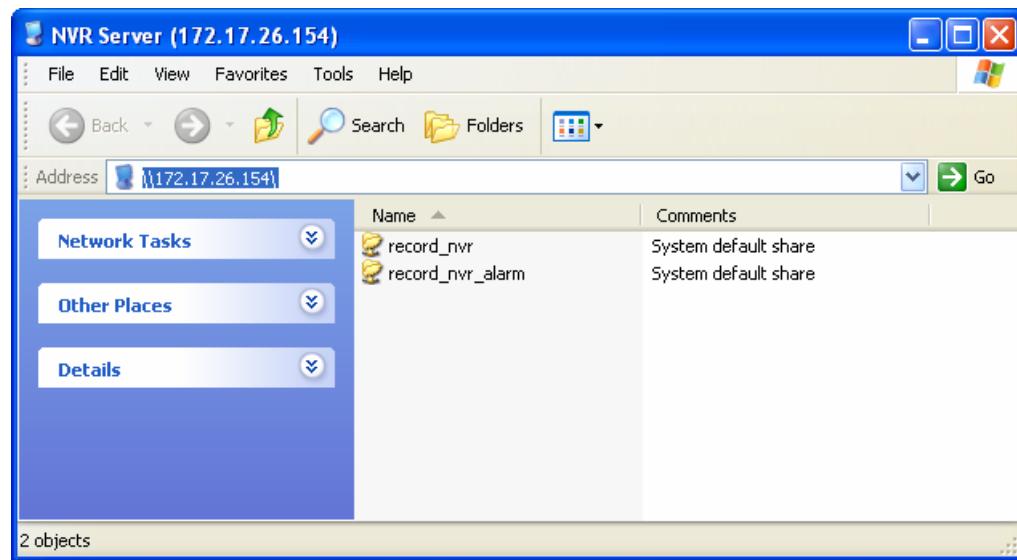
- FTP Service
 Enable FTP Service
 Map the FTP port of VioStor to the virtual server as
Passive FTP Port Range
 Use the default port range (55536 - 56559)
 Define port range: -
 Respond with external IP address for passive FTP connection request
External IP address:

Note: Only users with administration authority can use these file services and the files on the share folder can be read only.

4.3.1 Windows Network Neighborhood (SMB/CIFS)

You can access recorded files by the SMB/CIFS protocol, which is popularly used in Windows system. You can connect to the recording folder by either:

- On the web-based playback interface, click "SMB".
- In Windows XP, run <\\VioStorIP> from the Start menu. For example, if your VioStor IP is 172.17.26.154, enter \\172.17.26.154.



4.3.2 Web File Manager (HTTP)

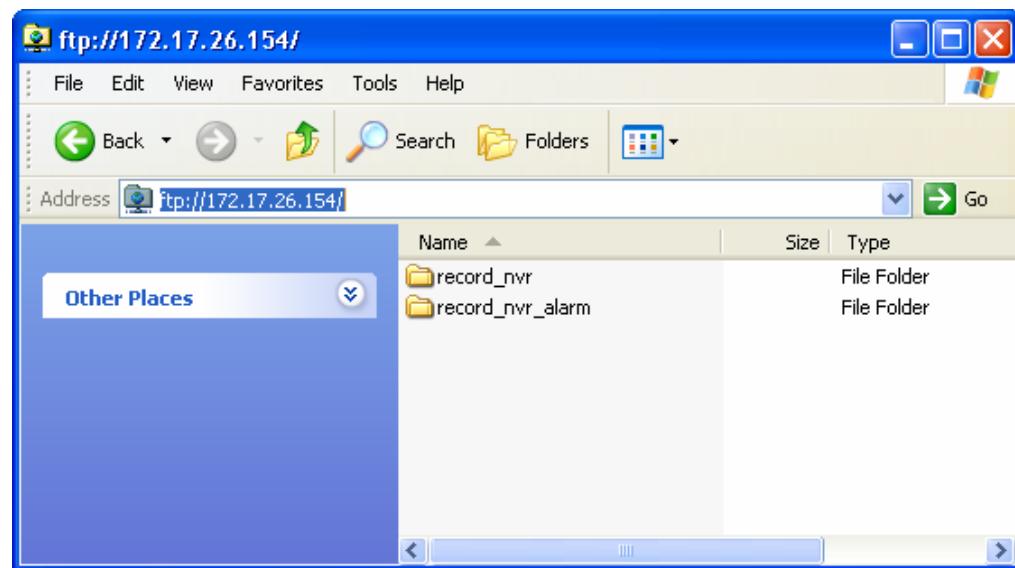
You can access the recording data from the web browser. On the web-based playback interface, click "Web".

FTP	Share Folder	Comment
	record_nvr	System default share
	record_nvr_alarm	System default share

4.3.3 FTP Server (FTP)

You can access the recording data by FTP:

- On the web-based playback interface, click “FTP”.
- In Windows Internet Explorer, enter ftp://username:password@VioStorIP/.
For example, enter ftp://admin:admin@172.17.26.154/ if the IP address of your VioStor is 172.17.26.154.



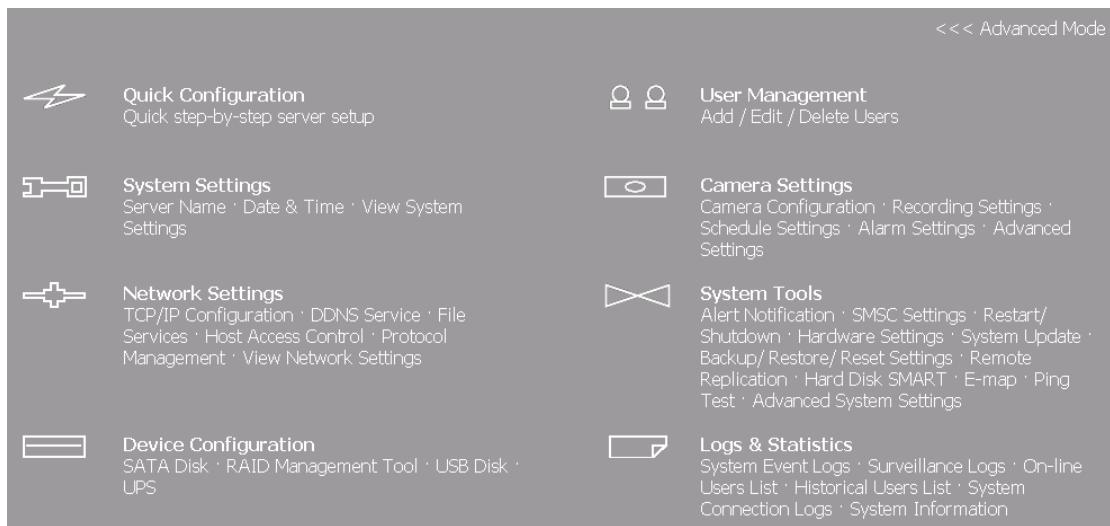
Chapter 5. System Administration

To login VioStor system configuration page, please login the monitoring page as an administrator and click .



The System Administration home page will be shown as below. An intuitive user interface is provided for the users to view the monitoring screens, connection and recording status, and network bandwidth.

	Preview	Camera Name	IP Address	Status	Recording status	Frame rate	Bit rate	Management
1		1. Panasonic HCM-481	172.17.27.134	Connected	Recording	10 fps	944.4 Kbps	
2		2. Axis Q7401	172.17.26.65	Connected	Recording	16 fps	435.9 Kbps	
3		3. Axis P3301	172.17.26.102	Connected	Recording	1 fps	122.7 Kbps	
4		4. i-Pro NS202	172.17.26.28	Connected	Recording	1 fps	232.9 Kbps	
5		5. IQeye 040S	172.17.27.24	Connected	Recording	13 fps	3606.8 Kbps	
6		6. IQeye 041S	172.17.27.25	Connected	Recording	2 fps	1795.5 Kbps	



If the system is not configured yet, the Quick Configuration page will be open to guide you through the setup steps first.

If there are questions, click on the help button  on the top right hand corner. The functions of the buttons are described below:

	Return to monitoring page
	Playback recorded video
	View On-line help
	Log out

5.1 Quick Configuration

Please follow the instructions on the web page to configure VioStor.

Note: All changes to the settings will be effective only when the last step is applied.

Step 1. Enter the server name.

- Step 1/6: Enter the name for this server.

Server Name :

Tip: You have to create a unique name for your server in order to identify your server quickly. The server name supports up to 14 characters which may include alphabets (A-Z and a-z), numbers (0-9) and dash (-). Space and period (.) are not allowed.

 Back  Next

Step 2. Change the administrator password or select to use the original password.

- Step 2/6: Change the administrator password.

Password :

Verify Password :

Use the original password

Note: If you select "Use the original password", the administrator password will not be changed.

 Back  Next

Step 3. Enter the date, time, and time zone of the server.

- Step 3/6: Enter the date, time and time zone for this server.

Time Zone :

Date / Time:

Synchronize with an Internet time server automatically

Server: (Status: --)

Set the server time the same as your computer time.

Tip: This system can be used by the network cameras or other servers as an NTP server by default. To ensure that the date and time of the network cameras is synchronized with this server, please set up all the network cameras by entering the IP address of this server as their NTP server.

 Back  Next

Step 4. Enter the IP address, subnet mask and default gateway of the server.

- Step 4/6: Enter the IP address, subnet mask and default gateway for this server.

Obtain TCP/IP settings automatically via DHCP

Use the following settings

IP Address:

172 . 17 . 26 . 210

Subnet Mask:

255 . 255 . 254 . 0

Default Gateway:

172 . 17 . 26 . 1

Primary DNS Server

10 . 8 . 2 . 11

Secondary DNS Server

10 . 8 . 2 . 9

Note: To allow this server to use host names for NTP or SMTP servers, you must provide the IP address of the primary DNS server.

 Back

 Next

Step 5. Select the disk configuration to initialize the disk volume for the first time configuration. All data on the disk(s) will be deleted.

- Step 5/6: Select the disk configuration.

Note: The hard drive(s) has (have) been initialized. Select "Do not set disk configuration" or the drive data will be cleared.

Please select the disk configuration for the initialization.

Disk configuration: Do not set disk configuration Total available storage capacity: 0 GB

The hard drive(s) detected by NVR:

Disk	Model	Capacity
Drive 1	WDC WD7500AACS-00D6B01.0	698.64 GB
Drive 2	WDC WD7500AACS-00D6B01.0	698.64 GB
Drive 3	WDC WD7500AACS-00D6B01.0	698.64 GB
Drive 4	WDC WD7500AACS-00D6B01.0	698.64 GB

Tip: All settings will be effective after confirming the changes in the last step.

 Back

 Next

Step 6. Initialize IP camera setting.

Select the camera model; enter the camera name and IP address of the camera, and the user name and password to login the camera. You can also enable or disable recording on each camera, test connection to the cameras and then click "Save" to apply the changes.

Click "Search" to search for the IP cameras in the local network. Select a channel for the camera and click "Add" to add the camera. By using the search function, the camera model and the IP address are filled in automatically. Click "Close" to close the search results.

- Step 6/6: Initialize IP camera setting.

1: 1.WCS-2060 A-PT 172.17.27.133
2: 2.FCS-0010-送修 172.17.26.21
3: 3.AXIS 210 172.17.26.18
4: 4.VCC-9800 PTZ 172.17.27.58
5: Camera 5
6: 6.DCS-5220 A-PT 172.17.27.129
7: 7.ELMO PTC-401C-IP 172.17.27.147
8: 8.FCS-1040 PT 172.17.27.140
9: Camera 9
10: 10.FCS-1010 PT 172.17.26.142
11: Camera 11
12: 12.IK-WB21 PTZ 172.17.27.21
13: 13.Sony DS10 172.17.27.68
14: 14.WCS-0020 PT 172.17.26.126
15: 15.PT-7135 A-PT 172.17.27.110
16: 16.IP-7134 A 172.17.27.218

Camera Brand: LevelOne
Camera Model: LevelOne FCS-1060/WCS-2060
Camera Name: 1.WCS-2060 A-PT
IP Address: 172.17.27.133
Port: 80
User Name: root
Password:
Enable recording on this camera:

Test Save Remove Search

Note: Please enter the settings of the connected network camera, and click Save to add it one by one. You can click Test to verify the settings you entered.

Back Next

After completing the settings, click "Start Installation" to apply the changes and initialize the system.

- [Finish](#)

The changes you have made to the server are as below. Click "Start installation" to begin the quick configuration; or click "Back" to return to the previous steps to modify the settings.

Server Name :	NVR
Password:	The password is unchanged.
Time Zone :	(GMT+08:00) Taipei
Time Setting:	2009/6/30 16:20:44
Network :	Obtain TCP/IP settings automatically via DHCP
Primary DNS Server	10.8.2.11
Secondary DNS Server	10.8.2.9
IP Camera :	You have configured 13 camera(s)
Disk configuration:	Do not set disk configuration
Drive 1:	WDC WD7500AACS-00D6B01.0 698.64 GB
Drive 2:	WDC WD7500AACS-00D6B01.0 698.64 GB
Drive 3:	WDC WD7500AACS-00D6B01.0 698.64 GB
Drive 4:	WDC WD7500AACS-00D6B01.0 698.64 GB

 Back  Start Installation

The quick configuration is completed and you can start to use the VioStor. Click "Start Monitoring" to view the live video from the cameras or click "Close" to return to the system administration home page.

[System is initializing, please wait.](#)

The system is being configured, do NOT power off the server or unplug the hard drive(s).

1. Enter the server name.
2. Change the administrator password.
3. Enter the date, time and time zone for this server.
4. Enter the IP address, subnet mask and default gateway for this server.
5. Initialize the disk volume on this server.
6. Add the IP cameras to be recorded to this server.



 System configuration completed.

 Start Monitoring  Close

[Congratulations! You have successfully configured the system. Please click "Close" to return to the home page or "Start Monitoring" to enter the monitoring page.](#)

5.2 System Settings

You can configure the basic system settings including server name, date & time, and view the system settings.

5.2.1 Server Name

Enter the name of the VioStor. The server name is 14 characters long at maximum, which supports alphabets, numbers, and hyphen (-). The server does not accept names with space or names in pure number. The following characters are not supported.

. ; : " < > * + = \ | ? , [] /



5.2.2 Date & Time

Set the date, time, and time zone according to your location. If the settings are incorrect, the following problems may occur:

- When playing the recorded video files, the display time will be incorrect.
- The time of event log displayed will be inconsistent with the actual time when an action occurs.

- Adjust the date, time and time zone of this server

Time Zone: (GMT+08:00) Taipei

Date: / Time: 2009/6/19 15 : 17 : 20

Synchronize with an Internet time server automatically
Server: pool.ntp.org (Status: --)

Set the server time the same as your computer time.

Note:
1. This system can be used by the network cameras or other servers as an NTP server by default. To ensure that the date and time of the network cameras is synchronized with this server, please set up all the network cameras by entering the IP address of this server as their NTP server.
2. To access NTP servers by host names, you must configure primary DNS server in the network settings.
3. If the time settings are changed, recording will stop to apply the changes (maximum 3 minutes).

Synchronize with an Internet time server automatically

You can enable this option to update the date and time of the system automatically with specified NTP (Network Time Protocol) server. Enter the IP address or domain name of the NTP server, e.g. time.nist.gov, time.windows.com. Then enter the time interval for adjusting the time.

The VioStor can be used by the IP cameras or other servers as an NTP server. To ensure the date and time of the IP cameras are synchronized with this server, please set up all the IP cameras by entering the IP address of the VioStor as their NTP server.

Note: The first time you enable NTP server, it may take several minutes for time synchronization before the time is correctly adjusted.

5.2.3 View System Settings

You can view the system settings, e.g. server name, on this page.

- [View System Settings](#)

Server Name

Server Name NVR

Date & Time

Date June 30, 2009
Time 04:21:20 PM
Time Zone (GMT+08:00) Taipei
NTP Server --
NTP Sync Interval --

System Information

Version 3.0.0 Build 1824

 OK

5.3 Network Settings

You can configure the WAN and LAN settings, DDNS service, file service, host access control, protocol management and view the network settings in this section.

5.3.1 TCP/IP Configuration

You can select one of the following two methods to configure the TCP/IP settings of the NVR.

- **Obtain IP address settings automatically via DHCP**

If your network supports DHCP, the NVR will use DHCP protocol to retrieve the IP address and related information automatically.

- **Use static IP address**

To use fixed IP address for network connection, enter fixed IP address, subnet mask, and default gateway.

Primary DNS Server: Enter the IP address of primary DNS server that provides DNS service for the NVR in external network.

Secondary DNS Server: Enter the IP address of secondary DNS server that provides DNS service for the NVR in external network.

Note: Jumbo Frame setting is valid in Gigabit network environment only. Besides, all network appliances connected must enable Jumbo Frame and use the same MTU value.

If your system supports 2 LAN ports, you can select to use failover, load balancing, or standalone settings. To use these features, make sure both LAN ports are connected to the network.

Network Settings

- TCP/IP Configuration
- DDNS Service
- File Services
- Host Access Control
- Protocol Management
- View Network Settings

- TCP/IP Configuration

Configuration of Network Interfaces

Failover Load balancing Standalone

Failover

Network transfer rate: Auto-negotiation

Obtain IP address settings automatically via DHCP

Use static IP address

Fixed IP Address: 169.254.1.100

Subnet Mask: 255.255.0.0

Default Gateway: 169.254.1.100

Primary DNS Server: 0.0.0.0

Secondary DNS Server: 0.0.0.0

Enable DHCP Server

Start IP Address: 169.254.1.100

End IP Address: 169.254.1.200

Lease Time: 1 Day(s) 0 Hour(s)

Current connection status: Connection speed: 100 Mbps, MTU: 1500 Bytes, LAN1:Down, LAN2:Up

Note: To use host names for NTP or SMTP servers, you must provide the IP address of the primary DNS server.

Apply

Configuration of Network Interfaces

● Failover (Default settings for dual LAN NVR models)

Failover refers to the capability of switching over the network transfer port to the redundant port automatically when the primary one fails due to hardware or connection error to avoid network disconnection. When the primary network port resumes to work, the network transfer will be switched back to that port automatically.

Failover

Network transfer rate	1000Mbps full-duplex
<input checked="" type="radio"/> Obtain IP address settings automatically via DHCP	
<input type="radio"/> Use static IP address	
Fixed IP Address	172 . 17 . 21 . 59
Subnet Mask	255 . 255 . 254 . 0
Default Gateway	172 . 17 . 20 . 1
Primary DNS Server	10 . 8 . 2 . 9
Secondary DNS Server	10 . 8 . 2 . 11
<input type="checkbox"/> Enable DHCP Server	
Start IP Address	169 . 254 . 1 . 100
End IP Address	169 . 254 . 1 . 200
Lease Time	1 Day(s) 0 Hour(s)

- **Load balancing**

Load balancing enables the network resources to spread between two or more network interfaces to optimize network transfer and enhance system performance. It operates on layer 3 protocol (IP, NCP IPX) only. Multicast/broadcast and other non-routable protocols, e.g. NetBEUI, can only be transferred via the main network port.

Note: To optimize the network transfer speed of the VioStor in load balancing mode, please use a managed Ethernet switch and enable 802.3ad (or link aggregation) on the ports of the switch that the Giga LAN ports of the VioStor are connected to.

Load balancing

Network transfer rate

Obtain IP address settings automatically via DHCP
 Use static IP address

Fixed IP Address . . .

Subnet Mask . . .

Default Gateway . . .

Primary DNS Server . . .

Secondary DNS Server . . .

Enable DHCP Server

Start IP Address . . .

End IP Address . . .

Lease Time Day(s) Hour(s)

- **Standalone**

The standalone option allows you to assign different IP settings for each network port. The VioStor can be accessed by different workgroups in two different subnets. However, when this function is enabled, failover does not work. You can only enable DHCP server for the primary network port (LAN 1).

LAN 1		LAN 2					
Network transfer rate							
Auto-negotiation							
<input checked="" type="radio"/> Obtain IP address settings automatically via DHCP							
<input type="radio"/> Use static IP address							
Fixed IP Address	169	.	254	.	100	.	100
Subnet Mask	255	.	255	.	0	.	0
Default Gateway	169	.	254	.	100	.	100
Primary DNS Server	10	.	8	.	2	.	9
Secondary DNS Server	10	.	8	.	2	.	11
<input type="checkbox"/> Enable DHCP Server							
Start IP Address	169	.	254	.	1	.	100
End IP Address	169	.	254	.	1	.	200
Lease Time	1	Day(s)	0	Hour(s)			

- **Network Transfer Rate**

You can select auto-negotiation (default), 1000 Mbps, or 100 Mbps. It is recommended to use the default setting that the server will determine network speed automatically.

- **Obtain IP address settings automatically via DHCP**

If your network supports DHCP, VioStor will use DHCP protocol to retrieve the IP address and related information automatically.

- **Use static IP address**

To use fixed IP address for network connection, enter fixed IP address, subnet mask, and default gateway.

- **Primary DNS Server**

Enter the IP address of primary DNS server that provides DNS service for VioStor in external network.

- **Secondary DNS Server**

Enter the IP address of secondary DNS server that provides DNS service for VioStor in external network.

Enable DHCP Server

If no DHCP is available in the LAN where the VioStor locates, you can enable this function to enable the VioStor as a DHCP server and allocate dynamic IP address to DHCP clients in LAN.

You can set the range of IP addresses allocated by DHCP server and the lease time. Lease time refers to time that IP address is leased to the clients by DHCP server. When the time expires, the client has to acquire an IP address again.

Note: If there is an existing DHCP server in your LAN, do not enable this function. Otherwise, there will be IP address allocation and network access errors.

5.3.2 DDNS (Dynamic Domain Name) Service

The DDNS service enables users to connect VioStor via domain name directly. There is no need to memorize the lengthy IP address of the server. To enable the DDNS service, you have to register a DDNS account from a DDNS provider. Please refer to [Appendix A](#).

The VioStor currently supports the DDNS service provided by:

1. DynDNS (<http://www.dyndns.org/>)
2. update.ods.org
3. members.dhs.org
4. www.dyns.cx
5. www.3322.org
6. www.no-ip.com
7. ipcam.jp

- DDNS Service

Enable Dynamic DNS Service

DDNS server: ▼

User Name:

Password:

Host Name:

Dynamic IP Address Fixed IP Address

• Apply

5.3.3 File Services

You can enable the SMB/ CIFS file service, Web File Manager and FTP service to access the recorded video files. These settings are enabled by default.

If your VioStor is installed behind the router, you could enable FTP port mapping, so that users from the external network can access the VioStor via FTP (please refer to [Appendix B](#)).

Passive FTP Port Range

You can use the default port range (55536–56559) or define a port range larger than 1023. When using this function, make sure you have opened the configured port range on your router or firewall.

Respond with external IP address for passive FTP connection request

When passive FTP connection is in use and the VioStor is configured under a router, if the remote computer cannot connect to the VioStor via WAN, you can enable this function. By enabling this function, the FTP service replies the manually specified IP address or automatically detects the external IP address so that the remote computer can connect to the VioStor successfully.

- Microsoft SMB/CIFS File Service
 Enable SMB/CIFS File Service

- Web File Manager
 Enable Web File Manager

- FTP Service
 Enable FTP Service
 Map the FTP port of NVR to the virtual server as

Passive FTP Port Range
 Use the default port range (55536 - 56559)
 Define port range: -

Respond with external IP address for passive FTP connection request
External IP address:

Note: Only users with administration authority can use these file services and the files on the share folder can be read only.

Apply

5.3.4 Host Access Control

Specify the connections to be allowed and denied to access the VioStor. Choose one of the following options to restrict access from a network or an IP address (host) to the server:

- Host Access Control

Allow all connections
 Allow connections from the list only
 Deny connections from the list

Host
 Network

IP Address: . . .
Netmask: 255. . 0. . 0.

Add Remove

• Apply

1. Allow all connections (Default setting)

Allow connection from all hosts to the server.

2. Allow connections from the list only

Allow connection from hosts specified on the list only.

Note: When this function is enabled, you can only use PC that the IP address is listed on the connection list to connect or find the VioStor. The IP address not included in the list will not be able to detect the VioStor not listed in allowed connections.

3. Deny connections from the list

Deny connection from hosts specified on the list.

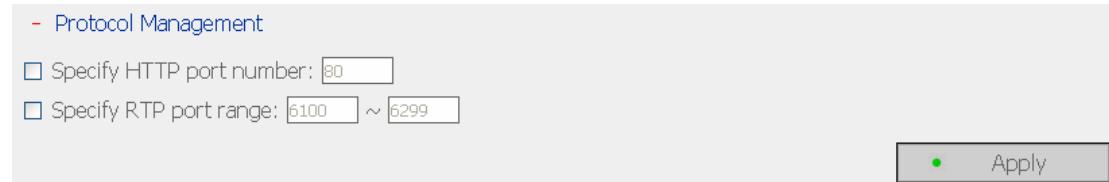
Note: Make sure your PC is added in the list of hosts allowed to connect to the server. Otherwise, the VioStor will disconnect your PC when you apply the new settings.

5.3.5 Protocol Management

To assign a specific port for accessing the VioStor by the web browser, please enable the option “Specify HTTP port number” and enter the port number. The default setting is 80.

RTP (Real-time Transfer Protocol) is a standardized packet format for delivering real-time audio and video data of IP cameras over the Internet. The real-time data transfer is monitored and controlled by RTP (also RTCP). The default setting is 6100–6299. If your IP cameras use different RTP ports, please enable “Specify RTP port range” and enter the port numbers.

Note: Make sure you have opened the ports you set on the router or firewall to ensure normal monitoring and recording.



– Protocol Management

Specify HTTP port number:

Specify RTP port range: ~

● Apply

5.3.6 View Network Settings

You can view current network settings and status of VioStor in this section.

Network Configuration	
Configuration of Network Interfaces	Failover
Network Speed	Auto-negotiation
Connection Type	Static
IP Address	10.8.12.48
Subnet Mask	255.255.254.0
Default Gateway	10.8.12.1
Primary DNS Server	10.8.2.11
Secondary DNS Server	0.0.0.0
MAC Address	00:10:18:00:00:00
Connection Status	100 Mbps, LAN1:Down, LAN2:Up
DDNS Service	disabled
DDNS Server	--
DDNS Host Name	--
SMB/CIFS Service	On
Web File Manager	On
FTP Service	On
FTP Port	21
Host Access Control	Off

 Close

5.4 Device Configuration

You can configure SATA disk, RAID management tool, USB disk, and UPS settings in this section.

5.4.1 SATA Disk

This page shows the model, size and current status of the disk(s) installed on the VioStor. You can format and check disks, and scan bad blocks on the disks. When the SATA disks are formatted, the VioStor will create the following default share folders:

- record_nvr: The folder for saving regular recording files
- record_nvr_alarm: The folder for alarm recording

The screenshot shows the 'Device Configuration' interface with the 'SATA Disk' option selected. The 'New Disk Volume Configuration' section displays six volume types with their respective icons and descriptions. The 'Current Disk Volume Configuration' section shows a table of four physical disks, all of which are in a 'Good' state.

Disk	Model	Capacity	Status	Bad Blocks Scan	SMART Information
Drive 1	WDC WD7500ACBS-00D6B01.0	698.64 GB	Ready	Scan now...	Good
Drive 2	WDC WD7500ACBS-00D6B01.0	698.64 GB	Ready	Scan now...	Good
Drive 3	WDC WD7500ACBS-00D6B01.0	698.64 GB	Ready	Scan now...	Good
Drive 4	WDC WD7500ACBS-00D6B01.0	698.64 GB	Ready	Scan now...	Good

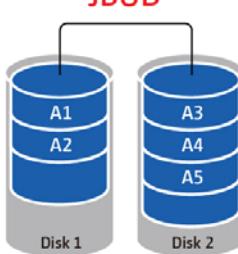
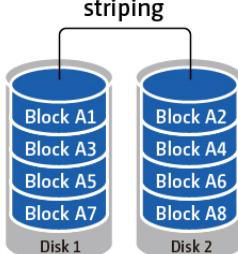
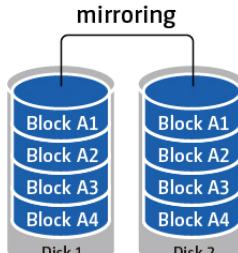
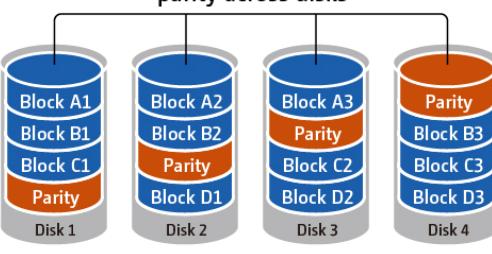
Physical Disks

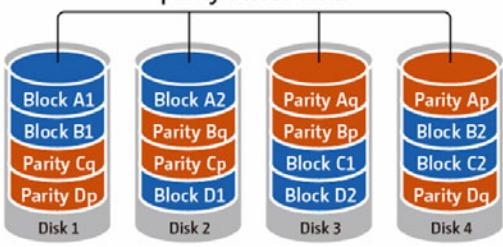
Volume	Total Size	Free Size	Status	Format	Check Disk	Delete Disk Volume
RAID 5 Disk Volume: Drive 1 2 3 4	2058.61 GB	1544.52 GB	Ready	Format now...	Check now...	Remove now

Logical Volumes

Disk Configuration	Applied NVR Models
Single disk volume	All models
RAID 1, JBOD (just a bunch of disks)	2-bay models or above
RAID 5, RAID 6, RAID 5+hot spare	4-bay models or above
RAID 6+hot spare	5-bay models or above

You can create the disk volume of the following type:

<p>Single Disk Volume</p> <p>Each hard disk drive is used as a standalone disk. If a disk is damaged, all the data will be lost.</p>	
<p>JBOD (Just a bunch of disks)</p> <p>JBOD is a collection of hard disk drives that does not offer any RAID protection. The data are written to the physical disks sequentially. The total storage capacity equals to the sum of the capacity of all the member drives.</p>	<p>JBOD</p> 
<p>RAID 0 Striping Disk Volume</p> <p>RAID 0 (striping disk) combines 2 or more hard disk drives into one larger volume. The data is written to the hard disk drives without any parity information and no redundancy is offered. The disk capacity equals the number of hard disk drives in the array times the size of the smallest hard drive.</p>	<p>RAID 0 striping</p> 
<p>RAID 1 Mirroring Disk Volume</p> <p>RAID 1 duplicates the data between two hard disk drives to provide disk mirroring. To create a RAID 1 array, a minimum of 2 hard drives are required.</p>	<p>RAID 1 mirroring</p> 
<p>RAID 5 Disk Volume</p> <p>The data are striped across all the drives in a RAID 5 array. The parity information is distributed and stored across each drive. If a member drive fails, the array enters degraded mode. After installing a new drive to replace the failed one, the data can be rebuilt from other member drives that contain</p>	<p>RAID 5 parity across disks</p> 

<p>the parity information.</p> <p>To create a RAID 5 disk volume, a minimum of 3 hard disks are required.</p> <p>The storage capacity of a RAID 5 array equals $(N-1)$. N is the total number of drive members in the array.</p>	
<p>RAID 6 Disk Volume</p> <p>The data are striped across all the drives in a RAID 6 array. RAID 6 differs from RAID 5 that a second set of parity information is stored across the member drives in the array. It tolerates failure of two member drives.</p> <p>To create a RAID 6 disk volume, a minimum of 4 hard disks are required.</p> <p>The storage capacity of a RAID 6 array equals $(N-2)$. N is the total number of drive members in the array.</p>	<p>RAID 6 parity across disks</p> 

5.4.2 RAID Management Tool

*This function is not supported on VS-101, VS-201, NVR-104.

RAID management tool allows you to carry out capacity expansion, RAID migration, or spare drive configuration with the original drive data reserved.

- RAID Management Tool

This function enables capacity expansion, RAID configuration migration or spare drive configuration with the original drive data reserved.

Note: Make sure you have read the instructions carefully and you fully understand the correct operation procedure before using this function.

Current Disk Volume Configuration

Volume	Total Size	Status	Comment
Mirroring Disk Volume: Drive 1 2	456.98 GB	Ready	The operation(s) you can execute: - Expand capacity

The operation(s) you can execute:

[Expand capacity](#) [Add hard drive](#) [Migrate](#) [Configure spare drive](#) [Comment](#)

- **Expand capacity**

This function enables drive capacity expansion by replacing the drives in a configuration one by one. This option is supported for the following drive configurations:

- RAID 1 expansion
- RAID 5 expansion
- RAID 6 expansion

- **Add hard drive**

This function enables adding new drive member to a drive configuration. It is supported for the following drive configurations:

- RAID 5 expansion

- **Migrate**

This function enables a drive configuration to be migrated to a different RAID configuration. It is supported for the following drive configurations:

- Migrate single drive to RAID 1, 5, or 6
- Migrate RAID 1 to RAID 5 or 6
- Migrate RAID 5 to RAID 6

- Configure spare drive

This function enables adding or removing RAID 5 spare drive. The options available are:

- Add spare drive in RAID 5
- Remove spare drive in RAID 5

For detailed operation, please click “Comment” on the management interface to view the detailed operation instructions.

5.4.3 USB Disk

The VioStor supports USB disks for backup storage. Connect the USB device to the USB port of the server, when the device is successfully detected, the details are shown on this page.

* VS-101, VS-201, NVR-104 does not support FAT32 and NTFS.

- [USB Disk](#)

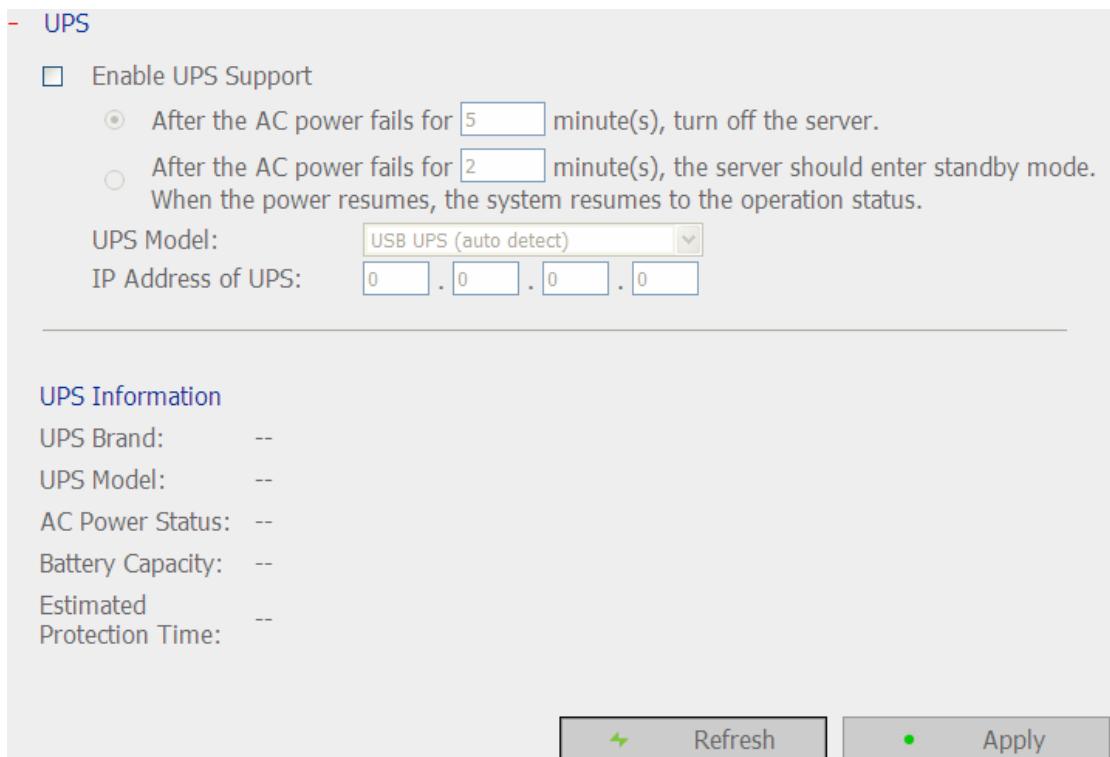
USBDisk1	Manufacturer:	IC25N040
	Model:	ATCS04-0
	Device Type:	USB 2.0
	Total / Free size:	38154 MB / 38087 MB
	File System:	NTFS
	Status:	Ready
	Format As:	<input type="button" value="NTFS ▾"/>
	Unplug:	<input type="button" value="Format now..."/>
		<input type="button" value="Unplug now..."/>

To remove the hardware device, please click [Unplug now...]. When the system does not show the device anymore, you can remove it safely.

Note: Do NOT unplug the device when it is in use to protect the device.

5.4.4 UPS

If there is UPS, you can enable UPS support. If the AC power is abnormal, the system will shut down according to the settings. If the time has not reached and the power of the UPS is not sufficient, the system will shut down immediately to protect the server.



UPS

Enable UPS Support

After the AC power fails for minute(s), turn off the server.

After the AC power fails for minute(s), the server should enter standby mode.

When the power resumes, the system resumes to the operation status.

UPS Model:

IP Address of UPS:

UPS Information

UPS Brand: --

UPS Model: --

AC Power Status: --

Battery Capacity: --

Estimated Protection Time: --

Refresh Apply

* It is recommended to connect UPS to one of the USB ports at the back of server.

- **Enable UPS Support**

Check this option to enable UPS support. You can configure the time when the system should shut down when AC power status is abnormal. In general, UPS can supply power for 5-10 minutes when AC power is down depending on the maximum load and number of connected devices of the UPS.

- **UPS Model**

Select the UPS model on the list. If your UPS is not available on the list, please contact the distributor or the technical support of QNAP.

- **IP Address of UPS**

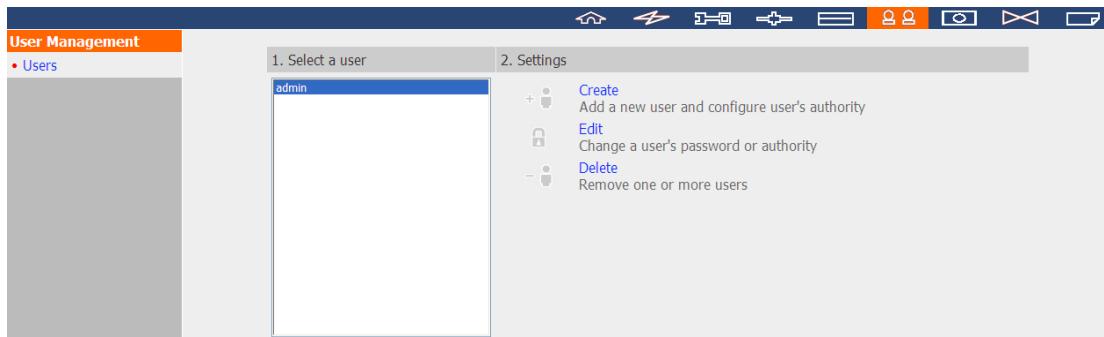
If you select "APC UPS with SNMP Management", please enter the IP address of the UPS.

Note: It is recommended to use APC Smart-UPS 700+ APC Network Management Card.

5.5 User Management

The NVR supports secure user access right management. A user can be defined as administrator, system manager, or user and given different rights of monitoring, playback, and system administration.

Note: The server supports up to 32 users (including system default users).



The NVR supports 3 types of users:

1. administrator

The system default administrator accounts are "admin" and "supervisor" (default password: **admin**). Both of them have the rights of system administration, monitoring, and playback. The administrators cannot be deleted. They have the rights to create and delete new administrators, system managers, and normal users, and change their passwords. Other newly created "administrators" have the right of system administration, monitoring, and playback but some rights are different from "admin" and "supervisor".

Please refer to [Chapter 5.5.4](#) for more details.

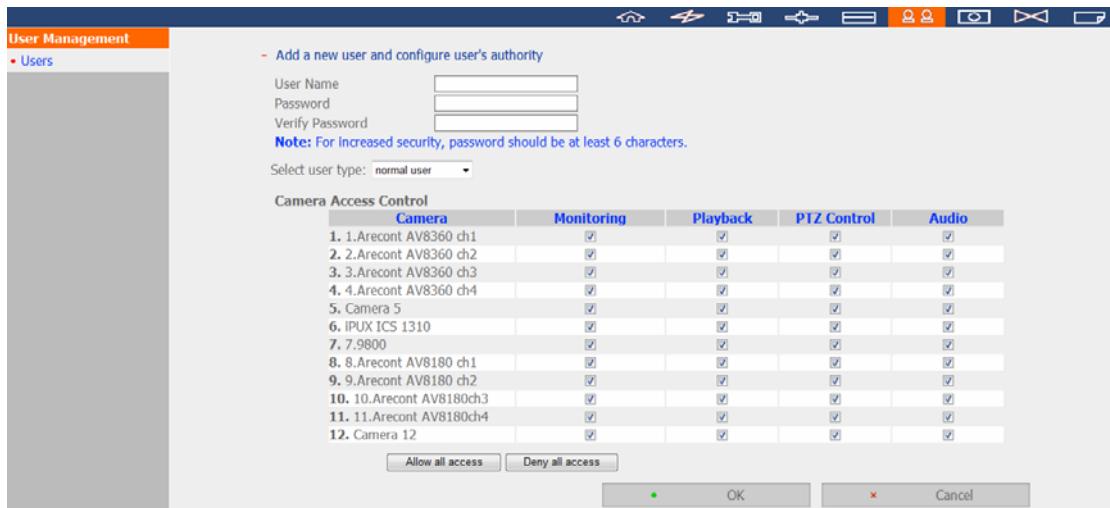
2. system manager

The default system manager account is "sysmgr" (default password: **admin**). This account has the right of system administration and cannot be deleted. "sysmgr" can create and delete other system manager and normal user accounts, assign monitoring, playback, and administration rights to them. Other newly created system managers will also have administration right but some rights are different from "sysmgr". Please refer to [Chapter 5.5.4](#) for more details.

3. user

Normal users have only the rights of monitoring and video playback. They have no administration authority. Please refer to [Chapter 5.5.4](#) for more details.

5.5.1 Create user



- **User Name**

The user name cannot be pure number. It must not exceed 32 characters. It is case-insensitive and supports double-byte characters, such as Chinese, Japanese, and Korean except:

“ / \ [] : ; | = , + * ? < > ` ’

- **Password**

The password is case-sensitive and can be 16 characters long at maximum. It is recommended to use a password of at least 6 characters.

- **Select user type**

Define the user as an administrator, system manager, or normal user.

- **Camera Access Control**

Assign the rights of monitoring (video/ audio), playback, and PTZ control to the user.

Note: Please refer to [Chapter 5.5.4](#) for further information of the user access rights.

5.5.2 Edit User

Select a user on the list and click "Edit". You can change the password; assign system administration and camera access control. However, the user name cannot be changed.

1. Select a user		2. Settings
admin		Create Add a new user and configure user's authority
supervisor		Edit Change a user's password or authority
sysmgr		Delete Remove one or more users
test		

5.5.3 Delete User

To delete a user, select a user on the list and click "Delete". Click "OK" to confirm.

1. Select a user		2. Settings
admin		Create Add a new user and configure user's authority
supervisor		Edit Change a user's password or authority
sysmgr		Delete Remove one or more users
test		

Note: The system administrator (admin, supervisor, sysmgr) cannot be deleted.

5.5.4 User Access Rights Comparison

The VioStor NVR supports three user types including system administrator, system manager, and normal user. The default system administrators are "admin" and "supervisor" who cannot change one another's password, user type, and control access rights to the IP cameras.

Note 1: The user can delete his/ her account

Note 2: The user can change his/ her password

		administrator			system manager		user
	Rights	admin	supervisor	Other administrators	sysmgr	Other system managers	User
1.	Create new "admin" account	Default	Default	No	No	No	No
2.	Create new "supervisor" account	Default	Default	No	No	No	No
3.	Create new administrator accounts	Yes	Yes	Yes	No	No	No
4.	Delete other administrator accounts	Yes	Yes	No (Note 1)	No	No	No
5.	Change the password of "admin"	Yes	No	No	No	No	No
6.	Change the password of "supervisor"	No	Yes	No	No	No	No
7.	Change the password of other administrators	Yes	Yes	No (Note 2)	No	No	No
8.	Change the user type of admin	Default	No	No	No	No	No
9.	Change the user type of supervisor	No	Default	No	No	No	No
10.	Change the user type of other administrators	Yes	Yes	Default	No	No	No
11.	Change the camera access control of admin	Yes	No	No	No	No	No
12.	Change the camera access control of supervisor	No	Yes	No	No	No	No

13.	Change the camera access control of other administrators	No	No	Yes	No	No	No
14.	Create sysmgr	No	No	No	Default	No	No
15.	Create other system manager accounts	Yes	Yes	Yes	Yes	Yes	No
16.	Delete sysmgr	No	No	No	No	No	No
17.	Delete other system manager accounts	Yes	Yes	Yes	Yes	No (Note 1)	No
18.	Change the password of sysmgr	Yes	Yes	Yes	No (Note 2)	No	No
19.	Change the password of other system managers	Yes	Yes	Yes	Yes	No (Note 2)	No
20.	Change the user type of sysmgr	No	No	No	Default	No	No
21.	Change the user type of other system managers	Yes	Yes	Yes	Yes	No	No
22.	Change the camera access control of sysmgr	No	No	No	No	No	No
23.	Change the camera access control of other system managers	No	No	No	No	No	No
24.	Create new users	Yes	Yes	Yes	Yes	Yes	No
25.	Delete users	Yes	Yes	Yes	Yes	Yes	No
26.	Change the user password	Yes	Yes	Yes	Yes	No	No
27.	Change the user type of normal users	Yes	Yes	Yes	Yes	No	No
28.	Change the camera access control of normal users	Yes	Yes	Yes	Yes	Yes	No
29.	System administration	Yes	Yes	Yes	Yes	Yes	No
30.	Monitoring	Yes	Yes	Yes	No	No	Default
31.	Playback	Yes	Yes	Yes	No	No	Default
32.	Open data encryption password	Yes	Yes	No	No	No	No

5.6 Camera Settings

You can configure IP camera, recording, schedule, alarm, and advanced settings.

5.6.1 Camera Configuration

Please follow the steps below to configure the IP cameras.

1. Select a camera number.
2. Select the camera brand.
3. Select the camera model.
4. Enter the camera name.
5. Enter the IP address or domain name of the camera.
6. Enter the user name and password to login the camera.
7. Select to enable recording or not.
8. Click "Apply" to save the settings.

The screenshot shows the 'Camera Settings' interface with the 'Camera Configuration' tab selected. On the left, a sidebar lists options: Camera Configuration (selected), Recording Settings, Schedule Settings, Alarm Settings, and Advanced Settings. The main area displays a table of cameras and configuration fields for camera 1.

	Camera Name	Brand	IP Address	WAN IP Address
1	Camera 1 221	Axis	172.17.27.54	
2	Camera 2 241QA/CH4/A	Axis	172.17.27.79	
3	Camera 3 241Q/CH3	Axis	172.17.27.31	
4	Camera 4 243SA/A	Axis	172.17.27.60	
5	Camera 5 241S	Axis	172.17.27.245	
6	Camera 6 241QA/CH1/A	Axis	172.17.27.79	
7	Camera 7 241QA/CH2/A	Axis	172.17.27.79	
8	Camera 8 241QA/CH3/A	Axis	172.17.27.79	

Below the table are configuration fields for camera 1:

- Camera Number: 1: Camera 1 221
- Camera Brand: Axis
- Camera Model: Axis 221
- Camera Name: Camera 1 221
- IP Address: 172.17.27.54
- Port: 80
- WAN IP Address: (for monitoring from public network *)
- Port: 80
- User Name: root
- Password: *****
- Enable recording on this camera

Buttons at the bottom include Apply, Remove, and Search. A note at the bottom states: "Note: All the camera configuration will not take effect until you click the "Apply" button. * If your IP camera is installed behind NAT router, you may input the public IP address (or URL) and the corresponding forwarded port of the router."

Note:

1. All the settings will not take effect until you click "Apply". When applying the changes, recording operation will stop for a while (maximum 1 minute) and then restart.
2. Click "Search" to search for the IP cameras in the local network. Select a channel for the camera and click "Add" to add the camera. By using the search function, the camera model and the IP address are filled in automatically. Click "Close" to close the search results.

Add generic IP camera support by CGI command

QNAP NVR provides an interface for the users to enter the JPEG CGI command of IP cameras in order to receive the video and audio streaming data from the IP cameras and monitor, record, and playback the video of the IP cameras on the NVR. This feature largely enhances the compatibility and expandability of the NVR.

Please follow the steps below to configure your IP camera.

1. Select the IP camera number.
2. Select "Generic Model" for the camera brand.
3. Select "Generic JPEG" for camera model.
4. Enter the cgi path of the IP camera in "HTTP URL" field.
5. Enter the camera name or the IP address of the camera.
6. Enter the user name and password for the IP camera.
7. Select to enable recording or not.
8. Click "Apply" to save the settings.

- Camera Configuration

	Camera Name	Brand	IP Address	WAN IP Address
1	1. ACTi ACD-2000Q	ACTi	172.17.26.85	
2	Camera 2			
3	3. Sanyo HD4000	Sanyo	172.17.26.230	
4	4. ACTi ACM-4200	ACTi	172.17.26.201	
5	Camera 5			
6	Camera 6			
7	7. Vivotek PZ7151	Vivotek	172.17.27.90	
8	8. QNAP VC300 ch1	QNAP	172.17.26.174	

Camera Number:

2: Camera 2

Camera Brand:

Generic Model

Camera Model:

Generic JPEG

HTTP URL

/video.cgi



Camera Name:

Camera 2

IP Address:

Test

Port

80

WAN IP Address:

(for monitoring from public network *)

Port

80

User Name:

Password:

Enable recording on this camera

Note: All the camera configuration will not take effect until you click the "Apply" button.

* If your IP camera is installed behind NAT router, you may input the public IP address (or URL) and the corresponding forwarded port of the router.

Note: QNAP NVR only supports JPEG CGI command interface, but does not guarantee the compatibility with all IP camera brands.

5.6.2 Recording Settings

Select a camera on the list and configure the recording resolution, frame rate, and quality. You can also enable manual recording. Click "Apply" to save the settings.

- Recording Settings

	Camera Name	Resolution	Frame Rate	Quality
1	Eastman Quad	320x240	3	Standard
2	Denmark	320x240	3	Compression 50
3	Shishmaref	Medium	3	Q=50
4	Shinagawa	Medium	3	Q=50
5	Airport	4CIF	Full	Compression 50
6	Puako Hawaii US	CIF	Full	Compression 50
7	Hotel Forum Rome	CIF	Full	Compression 50
8	Australia	CIF	3	Compression 50
9	Webcamera	320x240	Full	Compression 50

Camera Number:

Video Compression:

Resolution:

Frame Rate:

Quality:

Enable audio recording on this camera

Estimated Storage Space for Recording: 140 MB / Hour

Enable manual recording

Note: All the settings will not take effect until you click the Apply button. When applying the changes, recording will stop for a while (maximum 1 minute) and then restart.

1. **Video compression:** Choose a video compression format for the recording.
2. **Resolution:** Select the recording resolution.
3. **Frame rate:** Adjust the frame rate for recording. Note that the frame rate of the camera may be affected by the traffic of the network.
4. **Quality:** Select the image quality for recording. Higher quality consumes more disk space.
5. **Audio recording (optional):** To enable audio recording, click Enable audio recording on this camera.
6. **Estimated storage space for recording:** The number of estimated storage space for recording is only for reference. The actual space consumed depends on the network environment and camera performance.
7. **Manual recording:** To allow manual activation and deactivation of manual recording function on monitoring page, enable this option.

Note:

- Starting and stopping manual recording will not influent scheduled or alarm recording tasks. They are independent processes.
- All the settings will not take effect until you click "Apply". When applying changes, recording operation will stop for a while (maximum 1 minute) and then restart.

5.6.3 Schedule Settings

You can select continuous recording or scheduled recording. The default setting is continuous recording. To set up a recording schedule, please select a camera number on the list. Then select the date and time and click "Add". Click "Apply" to save the settings for the camera or click "Apply to all cameras" to apply to settings to all the cameras. To delete a schedule, click "Remove" on the schedule list.

- Schedule Settings

	Camera Name	IP Address	Scheduled Recording
1	1.Panasonic HCM-481	172.17.26.170	ON
2	2.HCM-311-A	172.17.26.117	ON
3	3.HCM-403/LAB-A	172.17.27.220	ON
4	4.HCM-311/RD-A	172.17.24.31	ON
5	5.HCM 381 /R/	172.17.27.62	ON
6	6.HCM-371 /RD-A	172.17.25.253	ON
7	7.Panasonic HCE-481	172.17.27.134	ON
8	8. Sony CS-10	172.17.26.61	ON

Camera Number:

Enable schedule recording

Recording Schedule

Days: Sun Mon Tue Wed Thu Fri Sat

Duration: All day Start time: : End time: :

Schedule List: (15 Max)

Sun, Mon, Tue, Wed, Thu, Fri, Sat: 00:00 ~ NextDay 00:00

Note: All the settings will not take effect until you click the Apply button. When applying the changes, recording will stop for a while (maximum 1 minute) and then restart.

Note:

1. You can add up to 15 schedules.
2. All the settings will not take effect until you click "Apply". When applying changes, recording operation will stop for a while (maximum 1 minute) and then restart.

5.6.4 Alarm Settings

The NVR provides “Traditional Mode” and “Advanced Mode” for the alarm settings. Select “Traditional Mode” to use the standard alarm settings in response to alarm events. To use advanced event management, select “Advanced Mode”.

Note: VS-201/ VS-101/ NVR-104 does not support Advanced Mode in “Alarm Settings”.

Traditional Mode

Select a channel (IP camera/ video server) on the list and configure the alarm settings. The video recording will be activated when the alarm input of the selected channel is triggered or a moving object detected.

When you enable the option “Activate alarm recording only on selected schedule”, the alarm recording will be activated only when the alarm input is triggered or a moving object is detected within the schedule. You can test the settings by clicking “Test”. Click “Apply” to apply the settings to the selected channel. To apply the same settings to all the channels on the list, click “Apply to all cameras”.

- **Alarm Settings**

Traditional Mode Advanced Mode

	Camera Name	IP Address	Alarm Recording
4	4.Arecont AV8360 ch4	172.17.26.85	ON
5	Camera 5		
6	iPUX ICS 1310	172.17.27.170	ON
7	7.9800	172.17.27.53	ON
8	8.Arecont AV8180 ch1	172.17.26.56	ON
9	9.Arecont AV8180 ch2	172.17.26.56	ON
10	10.Arecont AV8180ch3	172.17.26.56	ON
11	11.Arecont AV8180ch4	172.17.26.56	ON

Camera Number: **6: iPUX ICS 1310**

Enable alarm recording

Start recording when motion is detected by the camera

Activate alarm recording only on selected schedule

Basic Mode Advanced Mode

Days:

Duration:

All day Start time: : End time: :

Manually specify the alarm FTP server address of the camera

Note: All the settings will not take effect until you click the Apply button. When applying the changes, recording will stop for a while (maximum 1 minute) and then restart.

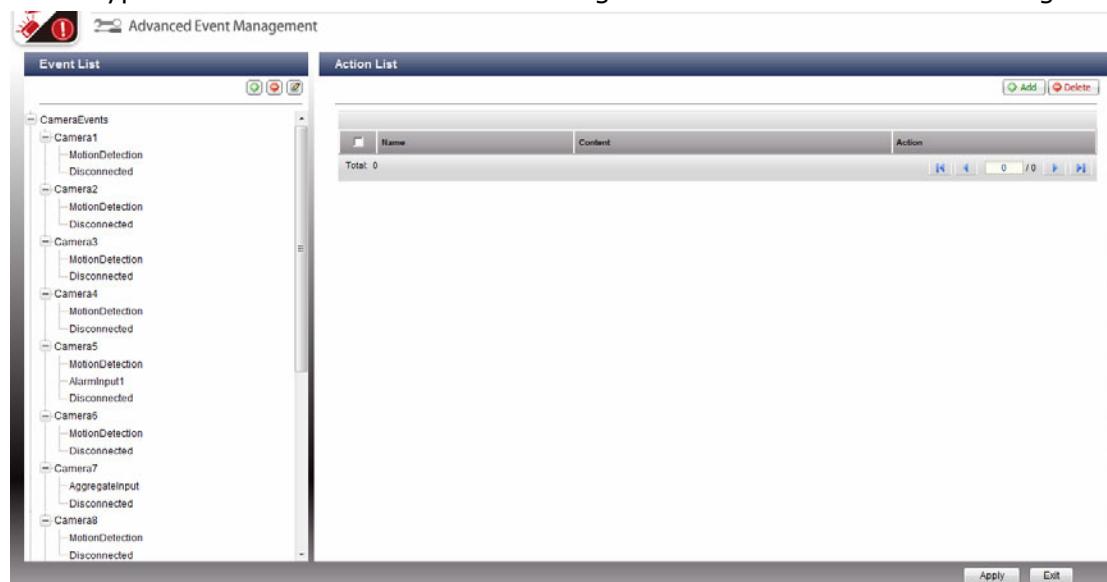
Note:

- All the settings will be effective after you click "Apply". When applying the changes, the current recording process will stop for a while (maximum 1 minute) and then restart.
- To avoid blocking by the firewall, the IP cameras or video servers configured for alarm recording must be located on the same subnet as the NVR.
- To switch from the traditional mode to the advanced mode, select "Advanced Mode" and click "Go to the settings page".

Advanced Mode:

The advanced mode consists of the event and action sections. You can define the action to take for each event triggered on the IP cameras or video servers connected to the NVR.

To configure the advanced event management by the "Advanced Mode", select an event type on the left channel list and configure the actions to take on the right.



Note:

- Click "Apply" to apply the settings or "Exit" to exit the settings page. If "Advanced Mode" is still selected on the "Alarm Settings" page, the advanced settings will be applied after the NVR restarts even if you selected to exit the settings page. The settings will be cancelled if you select to use "Traditional Mode" after exiting the "Advanced Mode".
- To avoid blocking by the firewall, the IP cameras or video servers configured for alarm recording must be located on the same subnet as the NVR.
- To switch from the advanced mode to the traditional mode, select "Traditional Mode" and click "Apply".

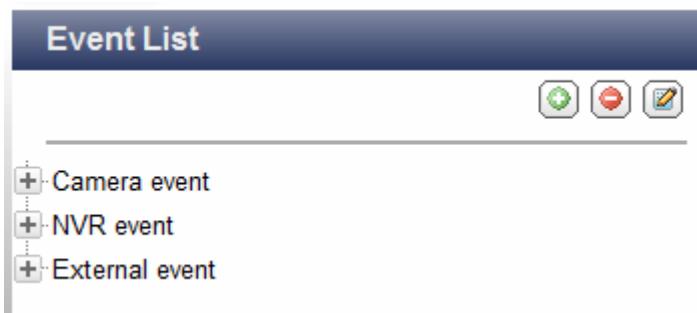
- **Events:**

The events supported by the NVR are classified as camera events (motion detection, alarm input, camera disconnection), NVR events (recording failure), and external events (user-defined events).

Note: The camera events available vary according to the features supported by the IP cameras or video servers.

Buttons on the event list

	Add an external event. This button is not applicable to camera events and NVR events.
	Edit an event. This button cannot be used to edit camera disconnection.
	Delete an external event. This button is not applicable to camera events and NVR events.

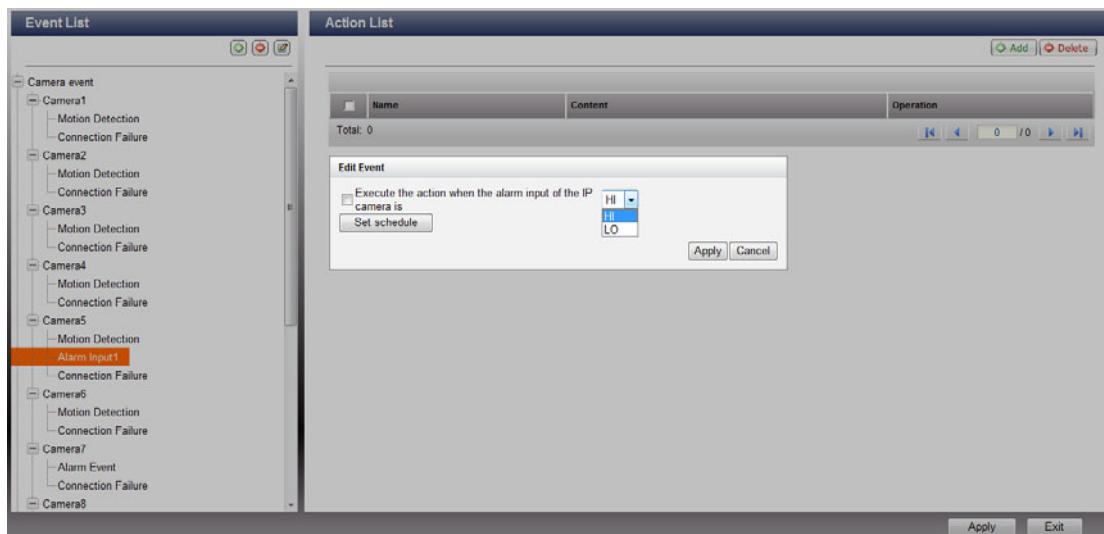


The NVR supports the following event types. Before you define the action settings, select the events to manage and configure the settings.

(1) Alarm input

This option allows the NVR to trigger an action when the alarm input of the IP camera or video server is triggered. Select "Camera event" from the "Event List". Locate the channel which supports alarm input and click "Alarm Input".

Next, click the edit button (), enable this option, configure the settings, and click "Apply". You may also set the schedule to define the active period of the alarm settings. After that, define the action on the right (discussed in later sections).



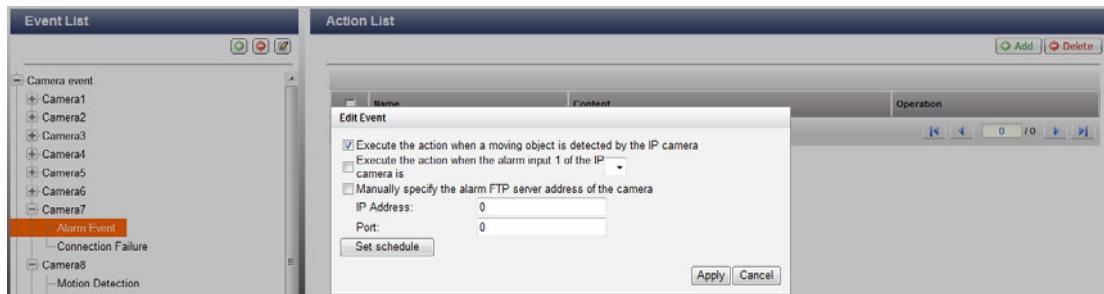
(2) Motion detection

This option allows the NVR to trigger an action when a moving object is detected by the IP camera or video server. Select “Camera event” from the “Event List”. Locate the channel and click “Motion Detection”. Next, click the edit button (edit icon), enable this option, configure the settings, and click “Apply”. You may also set the schedule to define the active period of the alarm settings. After that, define the action on the right (discussed in later sections).



(3) Alarm event

The alarm input and motion detection settings of some IP cameras or video servers may be combined together and called “Alarm Event” on the Event List. You can edit the event settings and define the action on the right (discussed in later sections).



(4) Connection failure

This option allows the NVR to trigger an action when the IP camera or video server is disconnected. Select “Camera Event” from the “Event List”. Locate the channel and click “Connection Failure”. After that, define the action on the right (discussed in later sections).



The screenshot shows the NVR's configuration interface. On the left, the "Event List" pane shows a tree structure with "Camera event" expanded, revealing "Camera1" and "Motion Detection". "Connection Failure" is highlighted with a red box. On the right, the "Action List" pane shows a table with columns "Name", "Content", and "Operation". The table is currently empty, with a message "Total: 0" at the bottom.

(5) Recording failure (NVR event)

This option allows the NVR to trigger an action when the video recording of the IP camera or video server fails due to hard disk bad blocks, file system crash, or other reasons. Select “NVR event” from the “Event List”. Click “Recording failure”. Then define the action settings on the right (discussed in later sections).



The screenshot shows the NVR's configuration interface. On the left, the "Event List" pane shows a tree structure with "NVR event" expanded, revealing "Recording Failure". "Recording Failure" is highlighted with a red box. On the right, the "Action List" pane shows a table with columns "Name", "Content", and "Operation". The table contains three entries: "Email" with content "smtp.gmail.com", "SMS" with content "SMS Provider: [Clickatell], Phone 1: 900442483, Phone 2: 952465308", and "Buzzer" with content "..". The table has a total count of 3. The "Operation" column for each row contains three small icons: a gear, a magnifying glass, and a trash can.

(6) External event (user-defined events)

To create a self-defined event on the NVR, select “User-defined Event” under “External event” on the “Event List”. Then click the + button. Enter the event name, for example, “door”.

After creating an event, click the event name and define the action on the right (discussed in later sections). After configuring the action settings, you can enter the CGI command (including the self-defined event name) in the web browser (Internet Explorer) to trigger the action anytime. The format of the CGI command is: http://NVRIP/logical_input.cgi?name=event-name. For example, http://10.8.12.12:80/logical_input.cgi?name=door



Event schedule settings:

When you edit an event (not including camera disconnection, NVR events, and external events), you can click "Set Schedule" to define when the alarm settings will be active.

To create a new schedule, select "New" and enter the schedule name. The schedule supports maximum 25 characters (double-byte characters, spaces, and symbols are allowed). Select the day and time when the alarm settings should be active. Click + to add a schedule; or - to delete a schedule. Up to 6 settings can be defined for each schedule.

The settings will be shown on the graphical table. Click "Apply" to save the settings. To use the same schedule for all the events, click "Apply to All Events". You can also select to use the default schedule or a formerly created schedule from the list. The default alarm settings are active all day, every day.

Schedule Settings

Select from the list New weekend

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
0	■						■
1	■						■
2	■						■
3	■						■
4	■						■
5	■						■
6	■						■
7	■						■
8	■						■
9	■						■
10	■						■
11	■						■
12	■						■
13	■						■
14	■						■
15	■						■
16	■						■
17	■						■
18	■						■
19	■						■
20	■						■
21	■						■
22	■						■
23	■						■

Start time: : End time: : Sun Mon Tue Wed Thu Fri Sat

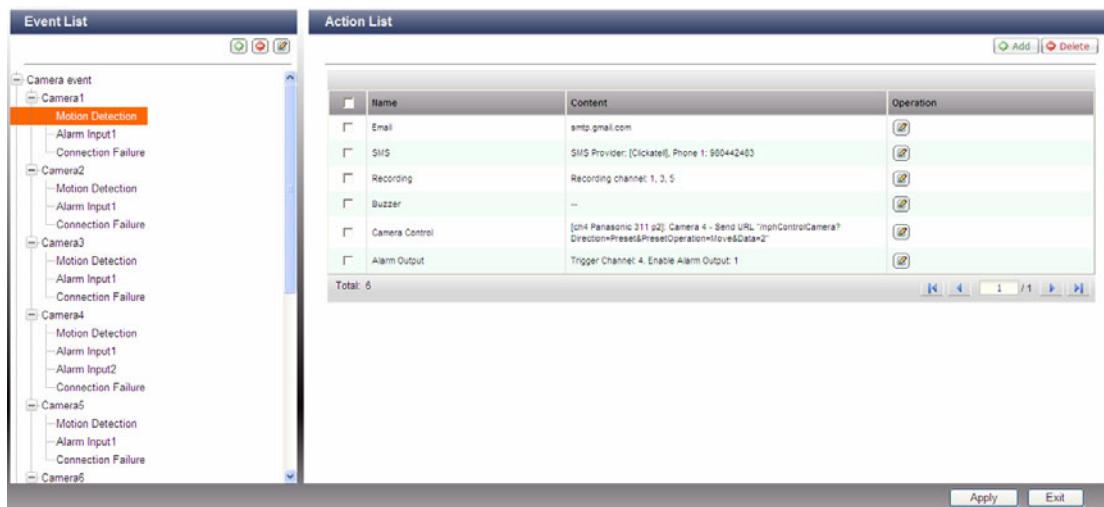
Note: You can select to use a schedule which has been created before. If you change the schedule settings, the new settings will be applied to all the events which use the same schedule settings.

- **Actions:**

The NVR supports different actions which can be activated when the selected events are triggered on the IP cameras or video servers. The actions include video recording, email alert, SMS alert, buzzer, PTZ camera control, alarm output, and logic output.

Buttons on the action list

	<p>Add an action:</p> <p>After configuring an event on the left, click "Add" to create an action in response to the event. Click "Apply" to save the settings.</p>
	<p>Edit an action:</p> <p>Select an event on the left. All the actions defined for this event will be shown. Check the box in front of the action name you want to edit. Then click this button on the "Action" column to edit the action settings.</p>
	<p>Delete an action:</p> <p>Select an event on the left. All the actions defined for this event will be shown. Check the box in front of the action name you want to delete and click "Delete". You can select to delete multiple actions.</p>



The screenshot shows the NVR software interface with two main windows: 'Event List' and 'Action List'.

Event List: This window displays a tree structure of events for various cameras. Under 'Camera1', 'Motion Detection' is selected. Other cameras listed are Camera2, Camera3, Camera4, Camera5, and Camera6, each with their own event categories like Motion Detection, Alarm Input, and Connection Failure.

Action List: This window shows a list of actions defined for the selected event. The table has columns for Name, Content, and Operation.

Name	Content	Operation
Email	smtp.gmail.com	
SMS	SMS Provider: [Click to edit], Phone 1: 900442463	
Recording	Recording channel: 1, 3, 5	
Buzzer	--	
Camera Control	[sn4 Panasonic 311 s2] Camera 4 - Send URL: "http://ControlCamera?Direction=Preset&PresetOperation=1&PresetData=2"	
Alarm Output	Trigger Channel: 4. Enable Alarm Output: 1	

Total: 6

Buttons at the bottom: Apply, Exit.

Note: Make sure you have enabled the action in the event settings; otherwise the action will not be executed. For example:

Edit Event

Execute the action when a moving object is detected by the IP camera

Specify the FTP address for the NVR to receive the alarm messages from the IP camera (optional)

IP Address:

Port:

(1) Recording

Select the channels (IP cameras or video servers) which will start recording when an event occurs. You may also select the following options:

- (i) Enter the time (in seconds) the recording should be executed after the event is triggered.
- (ii) Start recording when the event starts and stop recording when the event ends.

The option (ii) is applicable to duration events only. A duration event is an event with start and end time and lasts for a period of time. It does not include the events related to status change, such as camera disconnection or NVR recording failure.

If the action is triggered by duration event and both settings (i, ii) are enabled, the NVR will execute the second setting (ii) only.

Click "Select from the list" to select an action setting which has been configured before.

Add Action

Action Type: **Recording** New Select from the list

Select one or more channels to start recording when an event is triggered.

<input checked="" type="checkbox"/> Ch-01	<input type="checkbox"/> Ch-02	<input type="checkbox"/> Ch-03	<input type="checkbox"/> Ch-04	<input type="checkbox"/> Ch-05
<input type="checkbox"/> Ch-06	<input type="checkbox"/> Ch-07	<input type="checkbox"/> Ch-08	<input type="checkbox"/> Ch-09	<input type="checkbox"/> Ch-10
<input type="checkbox"/> Ch-11	<input type="checkbox"/> Ch-12			

Execute the action for: second (s) when the event is triggered

Execute the action when the event starts and stop the action when the event ends*.

* This option is applicable to duration events only. If the action is activated by duration event and both settings above are enabled, the NVR will execute this setting only.
Note: A duration event is an event with start and end time and lasts for a period of time. It does not include the events related to status change, such as camera's connection failure or NVR recording failure.

(2) Camera control

This option allows you to configure the PTZ camera to adjust to the preset position for monitoring or act according to the HTTP URL entered when an event is triggered. You can select a preset position from the drop-down menu or enter the HTTP URL.

Click "Select from the list" to select an action setting which has been configured before.

Note: The preset names will appear only after you have configured the preset position settings of the PTZ cameras.

Add Action

Action Type: New Select from the list

Select a preset position of the PTZ camera or enter the HTTP URL. The IP camera will adjust the monitoring angle to the preset position or do further action according to HTTP URL when an event is triggered.

Action Name:

Camera Name:

Preset Position

HTTP URL:

(3) Alarm output

Select to activate the alarm device connected to the IP camera when an event is triggered. You may also select the following options:

- (i) Enter the number of second(s) the alarm device will be active when the event is triggered.
- (ii) Activate the alarm device when the event starts and stop the alarm device when the event ends.

The option (ii) is applicable to duration events only. A duration event is an event with start and end time and lasts for a period of time. It does not include events related to status change, such as camera disconnection or NVR recording failure.

Click "Select from the list" to select an action setting which has been configured before.

Add Action

Action Type: New Select from the list

Select an alarm output of the IP camera. The alarm will be activated when an event is triggered.

Camera Number:

Note: Only the IP camera models of which the alarm output is supported by the NVR will be listed.

Execute the action for: second (s) when the event is triggered

Execute the action when the event starts and stop the action when the event ends*.

* This option is applicable to duration events only. If the action is activated by duration event and both settings above are enabled, the NVR will execute this setting only.

Note: A duration event is an event with start and end time and lasts for a period of time. It does not include the events related to status change, such as camera's connection failure or NVR recording failure.

(4) Email

To allow the system administrator to receive instant email alert when an event is triggered, enter the SMTP settings. Multiple email addresses can be entered as the recipients. You may also select to attach the snapshots of the multiple channels (IP cameras/ video servers) available on the NVR.

Click "Select from the list" to select an action setting which has been configured before.

Add Action

Action Type: New Select from the list

E-mail (SMTP) server address:

Enable SMTP Authentication

User Name:

Password:

Sender:

Recipients:

Subject:

Content:

Use SSL/ TLS secure connection

Attached with snapshot

Ch-01 Ch-02 Ch-03 Ch-04 Ch-05
 Ch-06 Ch-07 Ch-08 Ch-09 Ch-10
 Ch-11 Ch-12

Time interval to send the alert email when the same kind of events is triggered: second(s)

Send a test e-mail

(5) SMS

To allow the system administrator to receive instant SMS alert when an event is triggered, enter the SMS server settings. The default SMS service provider is Clickatell. To add other SMS service providers, click "Add" and enter the provider's name and the URL template text.

Click "Select from the list" to select an action setting which has been configured before.

Note: You will not be able to receive the SMS properly if the URL template text entered does not follow your SMS service provider's standard.

Add Action

Action Type: New Select from the list

[SMS Server Settings]

SMS Service Provider

Enable SSL Connection

SMS Server Login Name

SMS Server Login

Password

SMS Server API_ID

[SMS Notification Settings]

Country Code:

Cell Phone No. 1:

Cell Phone No. 2:

Message:

Interval of sending SMS text messages of the same events: Minute(s)

(6) Buzzer

Enable the buzzer when an event is triggered. You may also select the following options:

- (i) Enter the time (in seconds) the buzzer will sound when the event is triggered.
- (ii) Execute the buzzer when the event starts and stop the buzzer when the event ends.

The option (ii) is applicable to duration events only. A duration event is an event with start and end time and lasts for a period of time. It does not include events related to status change, such as camera disconnection or NVR recording failure.

If the action is triggered by duration event and both settings (i, ii) are enabled, the NVR will execute the second setting (ii) only.

Click "Select from the list" to select an action setting which has been configured before.

Add Action

Action Type: New Select from the list

Enable the buzzer on the NVR. The buzzer will sound when an event is triggered.

Execute the action for: second (s) when the event is triggered

Execute the action when the event starts and stop the action when the event ends*.

* This option is applicable to duration events only. If the action is activated by duration event and both settings above are enabled, the NVR will execute this setting only.
Note: A duration event is an event with start and end time and lasts for a period of time. It does not include the events related to status change, such as camera's connection failure or NVR recording failure.

(7) User-defined Action

You can enter a self-defined action when an event is triggered. Enter the login account and password, IP address, port, and the HTTP URL of other surveillance devices. You can manage the devices such as fire protection devices, power controller, and air conditioning control.

Click "Select from the list" to select an action setting which has been configured before.

Add Action

Action Type: New Select from the list

Enter IP address, port, HTTP URL, user name, and password of another network surveillance device. The device will be activated when an event is triggered.

Action Name:

IP Address:

Port:

HTTP URL:

User Name:

Password:

5.6.5 Advanced Settings

You can configure advanced recording settings in this section.

- Advanced Settings

Maximum length of each recording file: Minute(s)

When the available storage is less than GB:

- overwrite the oldest recordings
- stop writing recordings

Keep alarm recordings for at least day(s)

Remove recordings after day(s)

Alarm Recordings

Start recording video (at minimum) second(s) before the event occurs.

Stop video recording second(s) after the event ends.

Note: All the settings will not take effect until you click the Apply button. When applying the changes, recording will stop for a while (maximum 1 minute) and then restart.

- **Maximum period for each recording file:** Configure the maximum length of each recording file (maximum 15 min).
- **When the available storage is less than...GB:** Select the action to take when the available storage is less than the preset level. You can select to overwrite the oldest recordings or stop writing new recordings.
- **Keep alarm recordings for at least...day(s):** Specify the number of days that alarm recordings will be retained. This will prevent the recording files from being overwritten when the free storage space is insufficient.
- **Remove recordings after...day(s):** Enter the number of calendar days for VioStor to keep the recording files.
Please make sure your storage capacity is enough for saving the data for the number of calendar days you set. When recording data has reached the expiry date, expired video files will be deleted. For example, if you set to delete recording data after 7 calendar days, on the 8th day, files recorded on the first day of each camera will be deleted so that VioStor can start to save data of the 8th day.

- Pre/Post Alarm Recordings
 - **Start recording video...second(s) before the event occurs:** Enter the number of seconds to start recording before an event occurs.
 - **Stop video recording...second(s) after the event ends:** Enter the number of seconds to stop recording after an event ends.

The maximum number of seconds for the above settings is 300, i.e. 5 minutes.

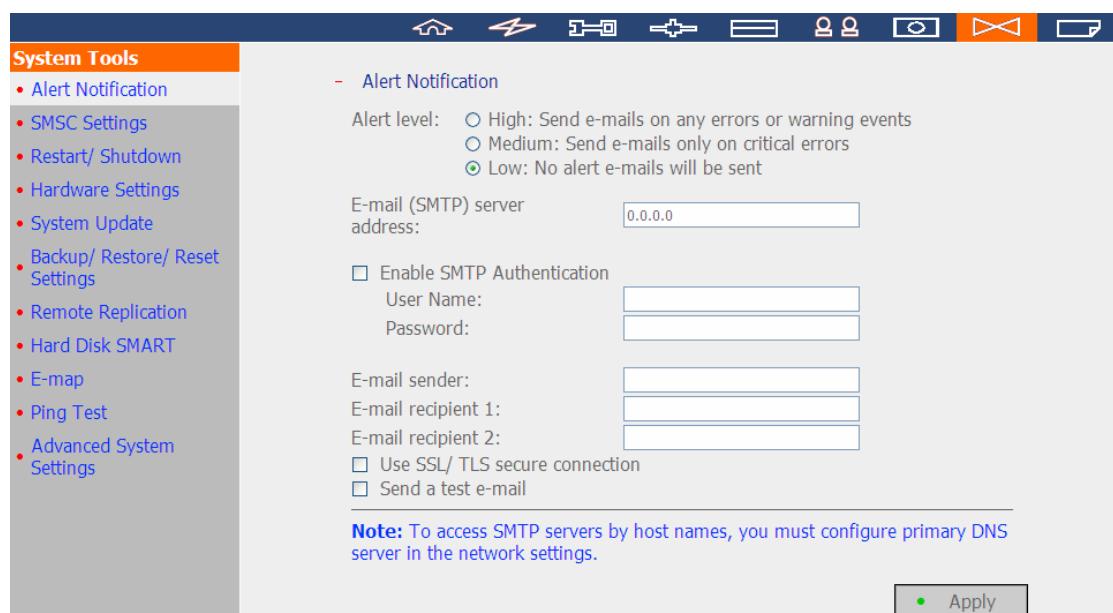
Note: All the settings will not take effect until you click "Apply". When applying changes, recording operation will stop for a while (maximum 1 minute) and then restart.

5.7 System Tools

System Tools enable you to optimize the system maintenance and management. You can set alert notification, restart or shut down the server, configure hardware settings, system update, back up/ restore/ reset settings, set E-map and do ping test.

5.7.1 Alert Notification

Enter the e-mail address of the administrator and the IP address of the SMTP server. In case of warning or malfunction, e.g. power outage, a drive is unplugged, an e-mail will be sent to the administrator automatically. You can go to Event Logs to check the details of all errors and warnings.



Note: It is recommended to send a test e-mail to make sure you can receive the alert mails.

5.7.2 SMSC Settings

You can configure the SMSC (Short message service center) settings to send SMS text messages to particular mobile phone numbers when an event takes place on the NVR. The default SMS service provider is Clickatell. You may also add your own SMS service provider by selecting "Add SMS Provider" on the drop down menu.

When you select "Add SMS service provider", you need to enter the name of the SMS provider and the URL template text.

Note:

- You will not be able to receive the SMS properly if the URL template text entered does not follow your SMS service provider's standard.
- Please send a test SMS to verify the settings are correct.
- When the "Advanced mode" is in use in the "Alarm Settings", this page will become inactive. You may go to "Camera Settings" > "Alarm Settings" > "Advanced Mode" to edit the SMS settings or select to use the "Traditional Mode" and configure the SMS settings on this page.

- SMSC Settings

You can configure the SMSC settings to send instant system alerts via the SMS service provided by the SMS provider.

[SMS Server Settings]

SMS Service Provider	<input style="border: 1px solid #ccc; padding: 2px 5px;" type="button" value="Clickatell"/> <input style="border: 1px solid #0070C0; background-color: #0070C0; color: white; padding: 2px 5px;" type="button" value="Clickatell"/> <input style="border: 1px solid #ccc; padding: 2px 5px;" type="button" value="Add SMS service provider"/>	http://www.clickatell.com
<input type="checkbox"/> Enable SSL Connection		
SSL Port:	<input type="text" value="443"/>	
SMS Server Login Name	<input type="text"/>	
SMS Server Login Password	<input type="text"/>	
SMS Server API_ID	<input type="text"/>	

[SMS Notification Settings]

Country Code:	<input style="border: 1px solid #ccc; padding: 2px 5px;" type="button" value="Afghanistan (+93)"/> <input style="border: 1px solid #0070C0; background-color: #0070C0; color: white; padding: 2px 5px;" type="button" value="Afghanistan (+93)"/>
Cell Phone No. 1:	+93 <input type="text"/> (Do not enter the beginning "0".)
Cell Phone No. 2:	+93 <input type="text"/> (Do not enter the beginning "0".)
<input type="checkbox"/> Send a test SMS message <i>(If the SMSC settings are incorrect, you will not be able to receive the test message.)</i>	

Send SMS text messages when the following events take place:

- Motion detection is detected on an IP camera
- Alarm input is triggered on an IP camera
- An IP camera is disconnected
- The system fails to save recording files

Interval of sending SMS text messages of the same events: Minute(s)

5.7.3 **Restart/ Shut Down**

Follow the steps below to restart or shut down the server.

1. Go to “System Tools” > “Restart/ Shutdown”.
2. Click “Restart” to reboot the server or “Shut Down” to turn off the server.

– [Restart/ Shutdown](#)

To restart the server, click Restart.

To shut down the server, click Shut Down.

• [Restart](#)

• [Shut Down](#)

5.7.4 Hardware Settings

You can enable or disable the hardware functions of the server.

- [Hardware Settings](#)
 - Enable configuration reset switch
 - Auto power on when power resumes after power loss
 - Enable front video backup button
 - Back up the recordings on the latest day(s) to the connected USB device when the button is pressed.
 - Enable light signal alert when the free size of SATA disk is less than the value: MB
 - Enable alarm buzzer (beep sound for error and warning alert)
 - Enable Redundant Power Supply Mode

Fan rotation speed settings: [Enable Smart Fan \(recommended\)](#)

When the system temperature is lower than 47°C, rotate at low speed. When the system temperature is higher than 52°C, rotate at high speed.

Self-defined temperature:
When the system temperature is lower than °C, stop fan rotation.
When the system temperature is lower than °C, rotate at low speed.
When the system temperature is higher than °C, rotate at high speed.

Note: The size of the external hard disk must be 10GB or larger.

The configuration reset switch is enabled by default. When this option is disabled, please make sure you have kept your password safely. Otherwise, the server cannot be reset anymore if the password is lost.

• [Apply](#)

- **Enable configuration reset switch**

By enabling this option, you can press the reset button for 5 seconds to reset the administrator password and system settings to default.

Note: The configuration reset switch is enabled by default. When this option is disabled, please make sure you have kept your password safely. Otherwise, the server cannot be reset anymore if the password is lost.

- **Auto power on when power resumes after power loss**

When this function is enabled, the server will turn on automatically when the power resumes after power loss.

- **Enable front video backup button**

VioStor supports direct copy of recording data on the server to the connected USB device via the USB port. You can set the number of days that the video is recorded to copy to the device. To use this function, please follow the steps below:

1. Set the number of days that the latest recordings should be backed up. If 3 days are entered, the recordings of today, yesterday and the day before yesterday will be backed up.
2. Connect a USB storage device, e.g. USB disk drive to the front USB port of VioStor.
3. Press and hold the one touch auto video backup button for 3 seconds*. The recording data on NVR will start to be copied to the USB device instantly. If the USB device is recognized, the USB LED glows in blue. The USB LED will blink in blue when the data is being copied. The LED will become blue again when data copy is finished. You can then safely remove the device.

Note: Video backup function supports only USB device of 10GB storage capacity or above.

This function is not supported on VS-8040U-RP, VS-8032U-RP, VS-8024U-RP.

* If you are using VS-101/ VS-201/ NVR-104, please press the button for 0.5 second to execute data copy.

- **Enable light signal alert when the free size of SATA disk is less than the value**

The status LED flashes red and green when this function is enabled and the free space of the SATA disk is less than the value. The range of the value is 1-51200 MB.

- **Enable alarm buzzer**

Enable this option. The system will sound when an error occurs.

- **Enable Redundant Power Supply Mode**

When the redundant power supply mode is enabled, the server beeps if any of the power supply units does not function properly.

*This function applies to the models with redundant power supply only.

- **Smart Fan configuration**

After enabling the smart fan, the fan rotation speed is automatically adjusted according to the server temperature. It is recommended to enable this option. By manually setting the fan rotation speed, the fan rotates at the defined speed continuously.

*This function is not supported on VS-101, VS-201, NVR-104.

5.7.5 System Update

Before updating the system firmware, please make sure the product model and the firmware version are correct. Follow the steps below to update firmware:

- System Update

Note: If the system is running properly, you do not need to update the firmware.

Current firmware version: 3.1.0 Build 2012

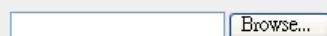
Before updating system firmware, please make sure the product model and firmware version are correct. Follow the steps below to update firmware:

Step 1: Download the release notes of the same version as the firmware from QNAP website <http://www.qnapsecurity.com/>. Read the release notes carefully to make sure you need to update the firmware.

Step 2: Before updating system firmware, back up all disk data on the server to avoid any potential data loss during system update.

Step 3: Click the [Browse...] button to select the correct firmware image for system update. Click the [Update System] button to update the firmware.

Note: System update may take tens of seconds to several minutes to complete depending on the network connection status. Please wait patiently. The system will inform you when system update is completed.



Update System

1. Download the release notes of the same version as the firmware from QNAP website <http://www.qnapsecurity.com/>. Read the release notes carefully to make sure you need to upgrade the firmware.
2. Before upgrading the system firmware, back up all disk data on the server to avoid any potential data loss during system update.
3. Click "Browse..." to select the correct firmware image. Click "Update System" to update the firmware.

The system update may take several minutes to complete depending on the network connection status. Please wait patiently. The system will inform you when system update is completed.

When performing system update, please make sure the power supply is at a steady state. Otherwise, the system may be unable to start up.

Note: If the system is running properly, you do not need to update the firmware. QNAP is not responsible for any forms of data loss caused by improper or illegal system update.

5.7.6 Backup/ Restore/ Reset Settings

- To backup all the settings, including user accounts, server name and network configuration etc., click “Backup” and select to open or save the setting file.
- To restore all settings, click “Browse” to select a previously saved setting file and click “Restore” to confirm.
- To reset all settings to default, click “Reset”. All data on the disk(s) will be deleted.

Caution: When you press “Reset” on this page, all the drive data, user accounts, network shares, and system settings are cleared and restored to default. Please make sure you have backed up all the important data and system settings before resetting the NVR.

- Backup/ Restore/ Reset Settings

- To restore all settings, click Browse to select a previously saved setting file and click Restore to confirm.
- To backup all settings, including user accounts, server name and network configuration etc., click Backup and select to open or save the setting file.
- To reset all settings to default, click Reset.

Note: The web browser may ask you input the default password when resetting the system if it is not the same as the current password.

[Browse...](#)

 [Restore](#)

 [Backup](#)

 [Reset](#)

5.7.7 Remote Replication

You can use the remote replication feature to copy the recording data of the local VioStor to a remote QNAP network attached storage (TS-509). The remote QNAP NAS is hereafter referred to as "the remote storage device".

Note: Before using this function, please make sure the Microsoft networking service of the remote storage device is enabled, and the corresponding path and user access right have been correctly configured.

1. Login VioStor and enter "System Tools" > "Remote Replication".

- Remote Replication

Enable Remote Replication

Back up alarm recordings only (instead of all recordings)

Back up the recordings of the latest day(s) only

Remote Destination

Remote Host IP Address

Destination Path (Network Share/Directory) /

User Name

Password

Remote Host Testing (Status: --)

Replication Schedule

Daily Hour : Minute

Weekly

Monthly Day

Replication Now

Overwrite the oldest recordings when the available storage on the remote host is less than 4GB

Perform mirroring replication by deleting extra files on the remote destination

Note: When remote replication is in process, the recording performance will be decreased

2. Enable remote replication (support multiple choices)

- Enable Remote Replication
 - Back up alarm recordings only (instead of all recordings)
 - Back up the recordings of the latest day(s) only

In the above example, the system only copies the alarm recording data of the latest 3 days to the remote storage device.

- Check the box “Enable remote replication” to activate this feature. The system executes automatic backup of recording data to the remote storage device according to the settings.
- When you select “Back up alarm recordings only (instead of all recordings)”, the system will only copy alarm recording data to the remote storage device. If this option is unchecked, the system will backup all recording data to the remote storage device.
- When you select “Back up the recordings of the latest...day(s) only” and enter the number of days, the system will back up the latest recording data to the remote storage device automatically according to your settings. If this option is unchecked, the system will copy all recording data to the remote storage device.

3. Configure your remote storage server

Remote Destination	
Remote Host IP Address	<input type="text" value="172.17.26.108"/>
Destination Path (Network Share/Directory)	<input type="text" value="public"/> / <input type="text" value="rr"/>
User Name	<input type="text" value="admin"/>
Password	<input type="text" value="*****"/>
Remote Host Testing	<input type="button" value="Test"/> (Status: --)

Note: It is recommended to execute the “Remote host testing” function to verify the connection to the remote storage device is successful.

4. Configure the remote replication schedule

Replication Schedule

Daily Weekly Monthly

01 Hour : 15 Minute
Monday Day

For example, to enable the system to copy recording data automatically to remote storage device at 01:15 every Monday, please do the following:

Check the box “Replication Schedule”, select “Weekly”, enter 01 Hour: 15 minute, and select “Monday”.

5. Backup Options

Replication Now

Overwrite the oldest recordings when the available storage on the remote host is less than 4GB

Perform mirroring replication by deleting extra files on the remote destination

- Select “Replication Now”, the system backs up recording data to remote storage device immediately.
- Select “Overwrite the oldest recordings when the available storage on the remote host is less than 4GB”; the system overwrites the oldest recording data when the free space on the server is less than 4GB.
- Select “Perform mirroring replication by deleting extra files on the remote replication”, the system syncs the recording data between VioStor and the remote storage device and delete any extra files on the remote destination.
- When the above options are all checked, the system executes remote replication immediately. It first judges if there are extra files on the remote location that are different from the local source. If yes, the extra files will be removed. After that, the system executes recording data backup and verifies if the free space of the internal hard disk drive is less than 4GB. If the free storage capacity is larger than 4GB, remote replication will be executed immediately. If the free storage space is less than 4GB, the system deletes the recording data of the oldest day and executes remote replication.

- The system displays the latest 10 remote replication records for you to analyze the status and troubleshooting.

Start Time	Finish Time	Replicated Data Size	Status
2007-11-08 18:00:07	2007-11-09 06:29:39	54.36 GByte(s)	Succeeded
2007-11-07 18:00:06	2007-11-08 10:18:26	74.17 GByte(s)	Succeeded
2007-11-06 18:00:02	2007-11-06 19:56:31	12.24 GByte(s)	Succeeded
2007-11-05 18:00:06	2007-11-05 20:05:06	12.53 GByte(s)	Succeeded
2007-11-04 18:00:03	2007-11-04 19:59:28	11.33 GByte(s)	Succeeded
2007-11-03 18:00:08	2007-11-03 20:01:54	11.75 GByte(s)	Succeeded
2007-11-02 18:14:09	2007-11-02 19:11:16	4.98 GByte(s)	Failed (Remote access error)
2007-11-01 18:00:04	2007-11-02 02:32:27	43.68 GByte(s)	Succeeded
2007-10-31 18:00:05	2007-11-01 03:34:13	33.01 GByte(s)	Failed (An internal error occurred)

In the above example:

1. When the status is shown as "Failed (Remote access error)": You can check the remote storage device is running or the network settings are correct.
2. When the status is shown as "Failed (An internal error occurred)": You can check the hard drive status of VioStor or check the Event Logs.

Note: The time required by VioStor to replicate data to remote storage device varies to the network environment. If the remote replication time is too long, some recording files may be overwritten by the system. To avoid this, it is recommended to refer to the status messages to analyze the time needed for remote replication and adjust the replication schedule accordingly.

5.7.8 Hard Disk SMART

This function is not supported on VS-101, VS-201, NVR-104.

This page enables users to monitor hard drive health, temperature, and usage status by the hard disk S.M.A.R.T. mechanism.

Select the hard drive and you can view the following information by clicking the corresponding buttons.

Field	Description
Summary	Displays the hard drive smart summary and the latest test result.
Hard disk information	Displays the hard drive details, e.g., model, serial number, drive capacity, etc.
SMART information	Displays the hard drive SMART. Any items that the values are lower than the threshold are regarded as abnormal.
Test	To perform quick or complete hard drive SMART test and display the results.
Settings	To configure temperature alarm. When the hard drive temperature is over the preset values, the system records error logs. You can also configure quick and complete test schedule. The latest test result is shown in the Summary page.

- Monitor hard disk health, temperature, and usage status by the hard disk S.M.A.R.T. mechanism.

Select hard disk:

Summary Hard Disk Information SMART Information Test Settings

Good No errors were detected on the hard disk. Your hard disk should be operating properly.

Hard disk model	Seagate Barracuda 7200.10 family
Drive capacity	298.09 GB
Hard drive health	Good
Hard drive temperature	38 <input type="button" value="°C ▾"/>
Test time	Thu Oct 2 11:32:18 2008
Test result	Test completed and no errors found(Rapid test)

5.7.9 E-map

You can upload an E-map to VioStor to illustrate the location of the cameras.

1. To upload an E-map, click “Browse” and select the E-map file. Then click “Upload”.
2. You can change the caption for the E-map and click “Apply”.
3. After uploading the E-map, click “Test” to view the map.

– E-map

E-map Caption: Apply

E-map File: Upload

Note: The uploaded E-map must be JPEG format.

5.7.10 Ping Test

To test the connection to an IP address, enter the IP address and click “Test”.

– Ping Test

Test the connection to specific IP address

5.7.11 Advanced System Settings

You can set the timeout period to log off the users from the configuration page when the idling time has reached.

Note: Timeout logoff does not apply to the monitoring, playback, advanced mode, device configuration, system update, remote replication, and Logs & Statistics pages.

- Advanced System Settings

Logoff the user from the configuration page when the user is idle for more than minutes.

Note: Timeout logoff does not apply to the monitoring, playback, advanced mode, device configuration, system update, remote replication, and Logs & Statistics pages.

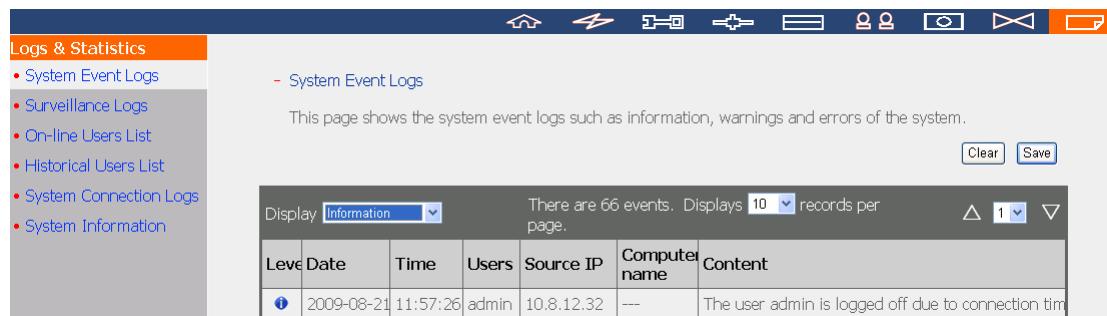


5.8 Logs & Statistics

5.8.1 System Event Logs

The server can store 10,000 recent event logs, including warning, error, and information messages. In case of system malfunction, event logs (only in English) can be retrieved to analyze system problems.

Click "Save" to save the logs as csv file. Click "Delete" to clear all logs.



The screenshot shows the 'System Event Logs' section of the 'Logs & Statistics' interface. On the left, a sidebar lists various log categories: System Event Logs (selected), Surveillance Logs, On-line Users List, Historical Users List, System Connection Logs, and System Information. The main content area displays a table of 66 events. The table has columns for Level, Date, Time, Users, Source IP, Computer name, and Content. One visible entry is: Level: Information, Date: 2009-08-21, Time: 11:57:26, Users: admin, Source IP: 10.8.12.32, Computer name: ---, Content: The user admin is logged off due to connection tim.

5.8.2 Surveillance Logs

This page shows the surveillance logs such as camera connection, motion detection, and camera authentication failure.



The screenshot shows the 'Surveillance Logs' section. The interface includes dropdown menus for 'Display' (set to 'All events') and 'Camera' (set to 'All'). It displays 10000 events with 10 records per page. The table has columns for Level, Date / Time, Type, Camera, and Content. Two entries are shown: 1) Level: Information, Date: 2009-06-30 16:37:08, Type: Alarm, Camera: 15, Content: Motion Stopped on Camera 15. 2) Level: Warning, Date: 2009-06-30 16:37:04, Type: Alarm, Camera: 15, Content: Motion detected on Camera 15.

5.8.3 On-line Users List

This page shows the information of the currently active users, e.g. the user name, IP address, and login time.

- [On-line Users](#)

Display the information of the on-line users accessing the system via networking services

Total 3 record(s).

Login date	Login time	Users	Source IP	Computer name	Connection type	Accessed resources
2009-06-30	16:13:29	admin	10.8.10.122	---	HTTP	Administration
2009-06-29	16:55:00	admin	172.17.26.125	---	HTTP	Monitoring
2009-06-29	16:54:22	admin	172.17.26.52	---	HTTP	Monitoring

5.8.4 Historical Users List

This page shows the information of the users who have logged in the system including the user name, IP address, login time, and the services they have accessed etc.

- [Historical Users List](#)

Display the information of the users that have accessed the system via networking services

Total 231 record(s). Displays 10 records per page.

△ 1 ▼

Login date	Login time	Users	Source IP	Computer name	Connection type	Accessed resources
2009-06-30	15:14:33	admin	172.17.26.173	---	HTTP	Monitoring
2009-06-30	15:34:38	admin	10.8.10.122	---	HTTP	Monitoring
2009-06-30	15:34:38	admin	10.8.10.122	---	HTTP	Administration

5.8.5 System Connection Logs

The logs of connections to the server via samba, FTP, AFP, HTTP, HTTPS, Telnet, and SSH are recorded in this page.

You can select to start or stop logging. The file transfer performance can be slightly affected by enabling the event logging.

- [System Connection Logs](#)

Record the logs of connections to the system

Status: Logging

[Stop logging](#) [Clear](#) [Save](#)

Display		All events	There are 2428 events. Displays 10 records per page.		△ 1			
Type	Date	Time	Users	Source IP	Computer name	Connect type	Accessed resources	Action
⚠	2009-06-30	16:35:16	nvrevtrp	172.17.27.21	localhost	FTP	---	Login Fail
⚠	2009-06-30	16:30:16	nvrevtrp	172.17.27.21	localhost	FTP	---	Login Fail

5.8.6 System Information

This page shows the system information, e.g., CPU usage, memory, and system temperature.

- [System Information](#)

CPU Usage	97.9 %	CPU Temperature	39°C/102°F
Total Memory	1001.8MB	System temperature	34°C/93°F
Free Memory	693.2MB	HDD 1 temperature	40°C/104°F
Packets Received	840071089	HDD 2 temperature	--
Packets Sent	233480062	HDD 3 temperature	--
Error Packets	0	HDD 4 temperature	--
System Up Time	8 Day(s) 15 Hour(s) 46 Minute(s)	HDD 5 temperature	--
		System fan speed	1757 RPM

Chapter 6. System Maintenance

This section provides a general overview on system maintenance.

6.1 Reset the Administrator Password and Network Settings

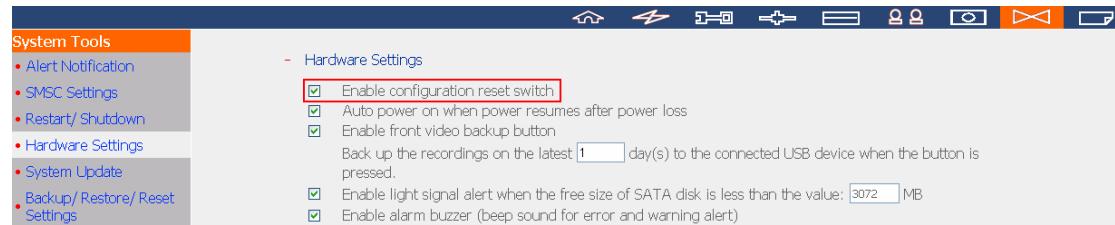
To reset the administrator password and network settings, press the reset button of the server for five seconds. A beep sound will be heard.

After resetting the system, you can login the server with the default user name and password:

Default user name: **admin***
Password: **admin**

*If you are using VS-201/ VS-101/ NVR-104, the default login name is "administrator" and the password is "admin".

Note: To reset the system by the reset button, the option "Enable configuration reset switch" in Hardware Settings must be activated.



6.2 Power Outage or Abnormal Shutdown

In case of power outage or improper shutdown of the server, the server will resume to the state before it is shut down. If your server does not function properly after restart, please do the following:

1. If the system configuration is lost, configure the system again.
2. In the event of abnormal operation of the server, contact customer service for technical support.

To avoid the above situations, please back up your data periodically and make sure you have done the following:

- Follow the instructions described in [Chapter 5.7.2](#) to restart or shut down the server.
- If there is an anticipated power outage, back up all important data and turn off the server properly until power supply is resumed.

6.3 Disk Hot Swapping (RAID Configuration)

This function is not supported on one-bay NVR models.

The VioStor supports hot swapping. When a hard disk of RAID disk volume fails, the failed disk can be replaced by a new one immediately without shutting down the system, and the recording data can be reserved. However, if the hard disks are working properly and recording is in process, do not hot swap the disks to avoid damage to the disks or recording files.

Chapter 7. LCD Panel

* This section is applicable to NVR models with LCD panel only.

The NVR provides a handy LCD panel for you to perform disk configuration and view the system information.

When the NVR is started up, you will be able to view the server name and IP address:

N	V	R	5	F	4	D	E	3						
1	6	9	.	2	5	4	.	1	0	0	.	1	0	0

For the first time installation, the LCD panel shows the number of hard drives detected and the IP address. You may select to configure the hard drives.

Number of hard drives detected	Default disk configuration	Available disk configuration options*
1	Single	Single
2	RAID 1	Single -> JBOD -> RAID 0 -> RAID 1
3	RAID 5	Single -> JBOD -> RAID 0 -> RAID 5
4 or above	RAID 5	Single -> JBOD -> RAID 0 -> RAID 5 -> RAID 6

*Press the "Select" button to choose the option, and press the "Enter" button to confirm.

For example, when you turn on the NVR with 5 hard drives installed, the LCD panel shows:

C	o	n	f	i	g	.	D	i	s	k	s	?		
→	R	A	I	D	5									

You can press the “Select” button to browse more options, e.g. RAID 6.

Press the “Enter” button and the following message shows. Press the “Select” button to select “Yes” to confirm.

C	h	o	o	s	e	R	A	I	D	5	?		
→	Y	e	s		N	o							

When you execute RAID 1, RAID 5, or RAID 6 configuration, the system will initialize the hard drives, create the RAID device, format the RAID device, and mount it as a volume on the NVR. The progress will be shown on the LCD panel. When it reaches 100%, you can access the RAID volume, e.g. create share folders and upload files to the folders on the NVR. In the meantime, to make sure the stripes and blocks in all the RAID component devices are ready, the NVR will execute RAID synchronization and the progress will be shown on “Disk Management” > “Volume Management” page. The synchronization rate is around 30-60 MB/s (vary by hard drive models, system resource usage, etc.).

Note: If a member drive of the RAID configuration was lost during the synchronization, the RAID device will enter degraded mode. The volume data is still accessible. If you add a new member drive to the device, it will start to rebuild. You can check the status on the “Volume Management” page.

When the configuration is finished, the server name and IP address will be shown. If the NVR fails to create the disk volume, the following message will be shown.

C	r	e	a	t	i	n	g	.	.	.			
R	A	I	D	5	F	a	i	l	e	d			

View system information by the LCD panel

When the LCD panel shows the server name and IP address, you may press the "Enter" button to enter the Main Menu. The Main Menu consists of the following items:

1. TCP/IP
2. Physical disk
3. Volume
4. System
5. Shut down
6. Reboot
7. Password
8. Back

1. TCP/ IP

In TCP/ IP, you can view the following options:

- 1.1 LAN IP Address
- 1.2 LAN Subnet Mask
- 1.3 LAN Gateway
- 1.4 LAN PRI. DNS
- 1.5 LAN SEC. DNS
- 1.6 Enter Network Settings
 - 1.6.1 Network Settings – DHCP
 - 1.6.2 Network Settings – Static IP*
 - 1.6.3 Network Settings – BACK
- 1.7 Back to Main Menu

* In Network Settings – Static IP, you can configure the IP address, subnet mask, gateway, and DNS of LAN 1 and LAN 2.

2. Physical disk

In Physical disk, you can view the following options:

2.1 Disk Info

2.2 Back to Main Menu

The disk info shows the temperature and the capacity of the hard drive.

D	i	s	k	:	1	T	e	m	p	:	5	0	°	C
S	i	z	e	:	2	3	2		G	B				

3. Volume

This section shows the disk configuration of the NVR. The first line shows the RAID configuration and storage capacity; the second line shows the member drive number of the configuration.

R	A	I	D	5					7	5	0	G	B
D	r	i	v	e	1	2	3	4					

If there is more than one volume, press the “Select” button to view the information. The following table shows the description of the LCD messages for RAID 5 configuration.

LCD Display	Drive configuration
RAID5+S	RAID5+spare
RAID5 (D)	RAID 5 degraded mode
RAID 5 (B)	RAID 5 rebuilding
RAID 5 (S)	RAID 5 re-synchronizing
RAID 5 (U)	RAID 5 is unmounted
RAID 5 (X)	RAID 5 non-activated

4. System

This section shows the system temperature and the rotation speed of the system fan.

C	P	U	T	e	m	p	:	5	0	°	C
S	y	s	T	e	m	p	:	5	5	°	C

S	y	s	F	a	n	:	8	6	5	R	P	M

5. Shut down

Use this option to turn off the NVR. Press the "Select" button to select "Yes". Then press the "Enter" button to confirm.

6. Reboot

Use this option to restart the NVR. Press the "Select" button to select "Yes". Then press the "Enter" button to confirm.

7. Password

The default password of the LCD panel is blank. Enter this option to change the password of the LCD panel. Select "Yes" to continue.

C	h	a	n	g	e	P	a	s	s	w	o	r	d
						Y	e	s	→	N	o		

You may enter a password of maximum 8 numeric characters (0-9). When the cursor moves to "OK", press the "Enter" button. Verify the password to confirm the changes.

N	e	w	P	a	s	s	w	o	r	d	:		
												OK	

8. Back

Select this option to return to the main menu.

System Messages

When the NVR encounters system error, an error message will be shown on the LCD panel. Press the “Enter” button to view the message. Press the “Enter” button again to view the next message.

S y s t e m E r r o r !
P l s . C h e c k L o g s

System Message	Description
Sys. Fan Failed	The system fan failed
Sys. Overheat	The system overheat
HDD Overheat	The hard drive overheat
CPU Overheat	The CPU overheat
Network Lost	Both LAN 1 and LAN 2 are disconnected in Failover or Load-balancing mode
LAN1 Lost	LAN 1 is disconnected
LAN2 Lost	LAN 2 is disconnected
HDD Failure	The hard drive fails
Vol1 Full	The volume is full
HDD Ejected	The hard drive is ejected
Vol1 Degraded	The volume is in degraded mode
Vol1 Unmounted	The volume is unmounted
Vol1 Nonactivate	The volume is not activated

Chapter 8. Troubleshooting

1. The monitoring screen did not display.

Please check the following:

- A. Check if you have installed ActiveX when logging in the monitoring page. Set the security level to "Medium" or lower in Internet Options of IE browser.
- B. Make sure VioStor is turned on and the network is correctly connected.
- C. The IP address of VioStor does not conflict with other devices in the same subnet.
- D. Check the IP address settings of VioStor and your computer. Make sure they are in the same subnet.

2. In the monitoring page, unable to view live video on one of the cameras.

Please check the following:

- A. The IP address, name, and password entered in the camera configuration page are correct. You can use the "Test" function to verify the connection.
- B. When the PC and the IP camera are on the same subnet, while VioStor is in another one, you cannot view the monitoring screen from the PC. You can solve the problems by the following methods:
Method 1: Enter the IP address of the IP camera as the WAN IP in VioStor.
Method 2: Configure the router to allow internal access to the public IP address and the mapped ports of the IP cameras.

3. Recording is not working properly.

- A. Make sure the hard disk tray is correctly locked in VioStor.
- B. When only one hard disk is installed, make sure the disk is installed in the tray of hard disk 1. Hard disk 1 should be installed on top of hard disk 2.
- C. Check if the recording function is enabled in Camera Configuration page (the function is enabled by default). Make sure the IP address, name, and password are correct.
- D. If the above items are verified to work properly while the status LED blinks in green, the hard disk(s) may be damaged or cannot be detected.

Please turn off the server and install a new hard disk.

Note: If you have updated the configurations of VioStor, recording will be stopped temporarily and restart again shortly.

4. I cannot login the administration page.

Please check if you have the administrator authority. Only administrators are allowed to login VioStor.

5. The live video is not clear or smooth sometimes.

- A. The image quality may be restricted and interfered by the actual network traffic.
- B. When there are multiple accesses to the camera or the VioStor server, the image quality will be reduced. And it is recommended to have three simultaneous connections to the monitoring page at maximum. For better recording performance, please do not open too many IE browsers to view the live video.
- C. The same camera may be shared by multiple VioStor servers for recording at the same time. Please use dedicated cameras.

6. The alarm recording does not function.

- A. Please login the administration page and go to Camera Settings-Alarm Settings. Make sure alarm recording is enabled for the camera.
- B. When using Panasonic BB-HCM311 cameras, the camera firmware must be upgraded to v1.3 for alarm recording to work properly.
- C. If VioStor is installed behind a router while the IP camera is not, alarm recording will not work.
- D. When alarm recording is enabled, make sure you have configured the number of days that alarm recordings will be retained in Camera Settings-Advanced Settings. Otherwise, the recordings may be overwritten.

7. The estimated storage space for recording displayed in Recording Settings page is different from the actual value.

This estimated value is for reference only. The actual disk space may vary according to the image contents, network environment, and the performance of the cameras.

8. The screen is displayed abnormally with strange horizontal lines when the resolution of Panasonic BB-HCM381 camera is set as 640x480.

This is due to the interlaced scanning design of the camera. Please login the camera's configuration page and go to Setup->Camera->Vertical Resolution. Then configure the setting as 240.

9. The E-map cannot be displayed correctly.

Please check the file format. VioStor supports E-map in JPEG only.

10. I cannot find my VioStor in QNAP Finder.

- A. Check if VioStor is turned on.
- B. Check the network connection of the computer and VioStor.
- C. Refresh QNAP Finder and check the IP address of VioStor. Make sure you have turned off all firewall software on your computer.

11. The changes to the system configurations cannot take effect.

After changing the settings in administration page, click the Apply button to apply the changes.

12. The monitoring page cannot be fully displayed in Internet Explorer.

If you are using the zooming function of Internet Explorer 7, the page may not be displayed properly. Please click F5 to refresh the page.

13. I cannot use the SMB, FTP, and Web File Manager of VioStor.

- A. Please go to "Network Settings-File Services" page and check if these three functions are enabled.
- B. When VioStor is installed behind a router and the access to VioStor is outside the router, you will not be able to use SMB and FTP services. Please refer to [Appendix B](#) for details.

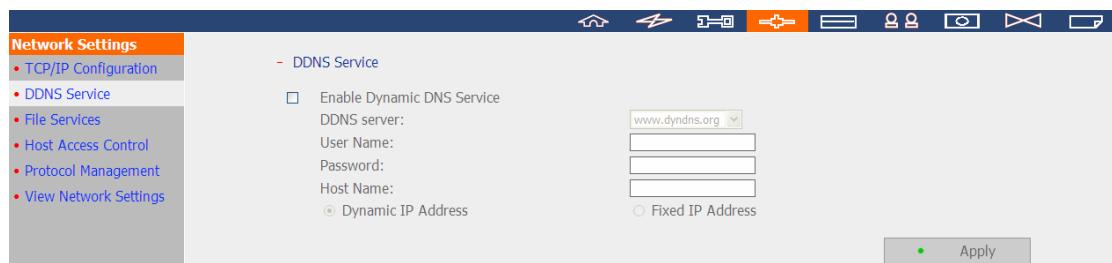
14. The server takes too long to restart.

When the server has been restarting for more than 5 minutes, please turn off the power and turn on the server again. If the problem persists, please contact the technical support.

Appendix A Dynamic Domain Name Registration

The VioStor supports DDNS service provided by DynDNS. You can go to DynDNS website <http://www.dyndns.org/> to register a dynamic domain name.

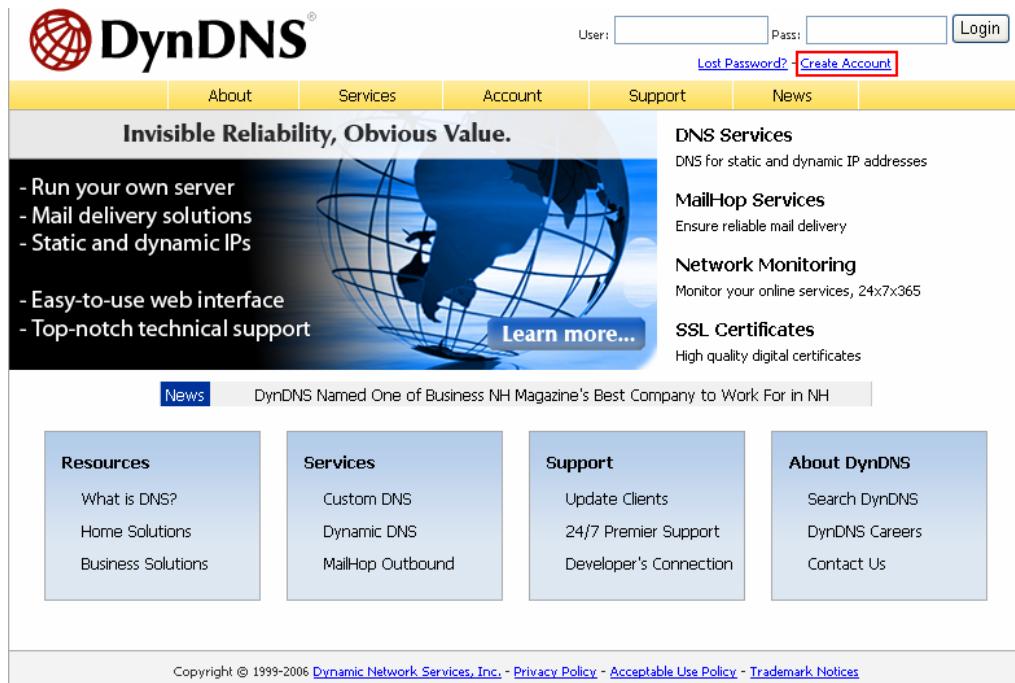
Configure and activate DDNS service to enable the Internet users to access your VioStor via this dynamic domain name. When the ISP assigns a new WAN IP address, the VioStor will update the new address to the DynDNS server automatically.



Registration Procedure

Please follow the steps below to register a dynamic domain name. This guide is for reference only. If there are any changes, please refer to the instructions or documents on the web site.

1. Open the browser and connect to <http://www.dyndns.com/>. Click "Create Account" to begin registration.



The screenshot shows the DynDNS website homepage. At the top, there is a navigation bar with links for 'About', 'Services', 'Account', 'Support', and 'News'. On the right side of the navigation bar, there are fields for 'User' and 'Pass' with a 'Login' button, and links for 'Lost Password?' and 'Create Account' (the latter is highlighted with a red box). Below the navigation bar, a banner features the text 'Invisible Reliability, Obvious Value.' and a list of services: 'Run your own server', 'Mail delivery solutions', 'Static and dynamic IPs', 'Easy-to-use web interface', and 'Top-notch technical support'. To the right of this list is a globe graphic with the text 'Learn more...'. To the right of the globe, there are four service categories: 'DNS Services' (DNS for static and dynamic IP addresses), 'MailHop Services' (Ensure reliable mail delivery), 'Network Monitoring' (Monitor your online services, 24x7x365), and 'SSL Certificates' (High quality digital certificates). At the bottom of the page, there is a footer with links for 'Resources' (What is DNS?, Home Solutions, Business Solutions), 'Services' (Custom DNS, Dynamic DNS, MailHop Outbound), 'Support' (Update Clients, 24/7 Premier Support, Developer's Connection), and 'About DynDNS' (Search DynDNS, DynDNS Careers, Contact Us). The footer also includes a copyright notice: 'Copyright © 1999-2006 [Dynamic Network Services, Inc.](#) - [Privacy Policy](#) - [Acceptable Use Policy](#) - [Trademark Notices](#)'.

- Enter the user name, email address, and password to create an account for DDNS service. Please verify your email address to receive the confirmation message from the server.



DynDNS

User: Pass:

[Lost Password](#) [Create Account](#)

[About](#) [Services](#) [Account](#) [Support](#) [News](#)

My Account

- [Create Account](#)
- [Login](#)
- [Lost Password?](#)

Create Your DynDNS Account

Please complete the form to create your free DynDNS Account.

User Information

Username:	<input type="text"/>	Instructions to activate your account will be sent to the e-mail address provided.
E-mail Address:	<input type="text"/>	
Confirm E-mail Address:	<input type="text"/>	
Password:	<input type="password"/>	Your password needs to be more than 5 characters and cannot be the same as your username. Do not choose a password that is a common word, or can otherwise be easily guessed.
Confirm Password:	<input type="password"/>	

About You (optional)

Providing this information will help us to better understand our customers, and tailor future offerings more accurately to your needs. Thanks for your help!

How did you hear about us:	<input type="text"/>	We do not sell your account information to anyone, including your e-mail address.
Details:	<input type="text"/>	

- Select to accept the terms of service.

Terms of Service

Please read the acceptable use policy (AUP) and accept it prior to creating your account. Also acknowledge that you may only have one (1) free account, and that creation of multiple free accounts will result in the deletion of all of your accounts.

("AUP") and any other operating rules and policies set forth by DynDNS. The AUP comprises the entire agreement between the Member and DynDNS and supersedes all prior agreements between the parties regarding the subject matter contained herein. BY COMPLETING THE REGISTRATION PROCESS AND CLICKING THE "Accept" BUTTON, YOU ARE INDICATING YOUR AGREEMENT TO BE BOUND BY ALL OF THE TERMS AND CONDITIONS OF THE AUP.

2. DESCRIPTION OF SERVICE

DynDNS is providing the Member with various DNS-based aliasing and hosting services. The Member must (1) provide all equipment necessary for its own Internet connection, including computer and modem, and (2) provide for the Member's own access to the Internet and pay any fees related with such connection. The Member agrees to provide and

I agree to the AUP:

I will only create one (1) free account:

4. Configure the mailing lists if necessary. Then click "Create Account".

— Mailing Lists (optional) —

DynDNS maintains a number of mailing lists designed to keep our users informed about product announcements, client development, our company newsletter, and our system status. Please use the checkboxes below to alter your subscription preference. Your subscription preference may be changed at any time through the [account settings](#) page.

Announce:	<input type="checkbox"/>
MailHop:	<input type="checkbox"/>
system-status:	<input type="checkbox"/>

— Next Step —

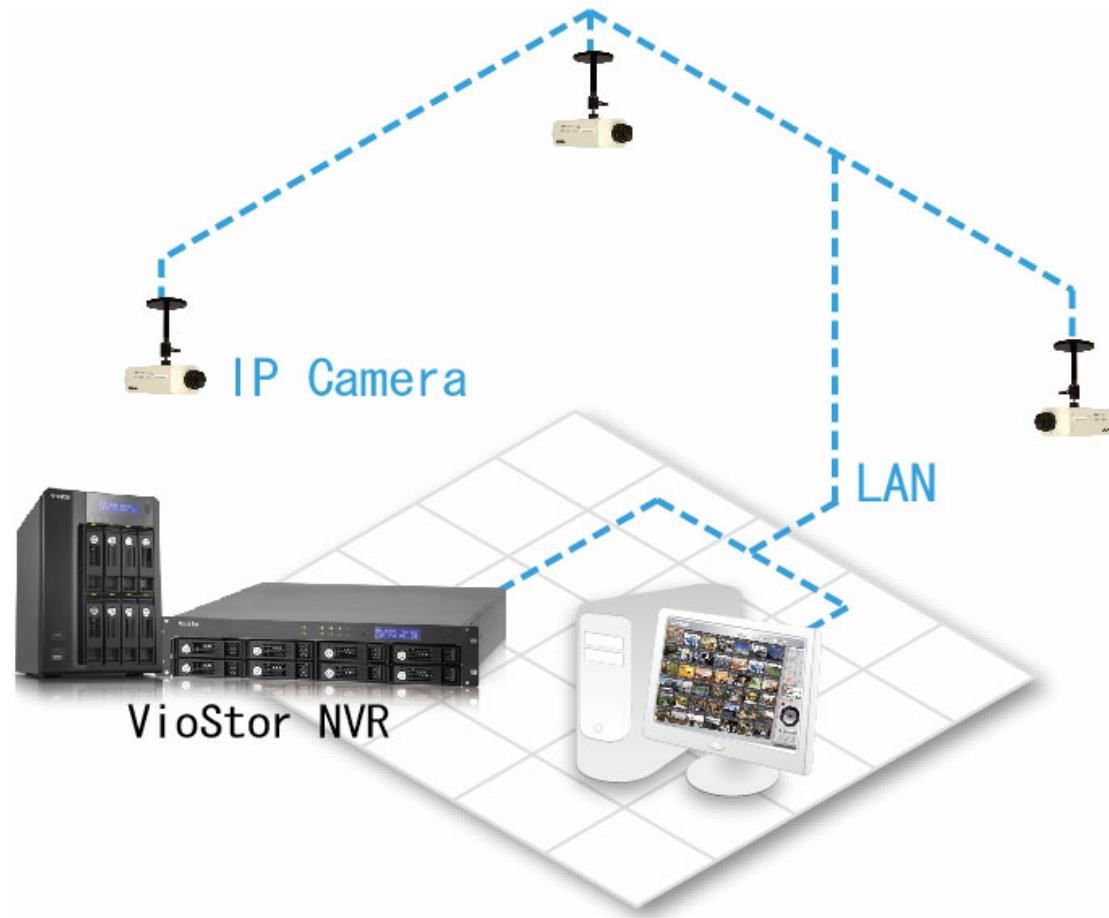
After you click "Create Account", we will create your account and send you an e-mail to the address you provided. Please follow the instructions in that e-mail to confirm your account. You will need to confirm your account within 48 hours or we will automatically delete your account. (This helps prevent unwanted robots on our systems)

[Create Account](#)

5. When your account is successfully created, a confirmation message will be sent to your e-mail address. Please follow the instructions in the e-mail to activate your account within 48 hours. When you have finished the confirmation process, you can apply for your own dynamic domain name. Please refer to the website of the DDNS provider for more information.

Appendix B Configuration Examples

Environment 1: VioStor, IP Camera, and monitoring PC are all in the same network

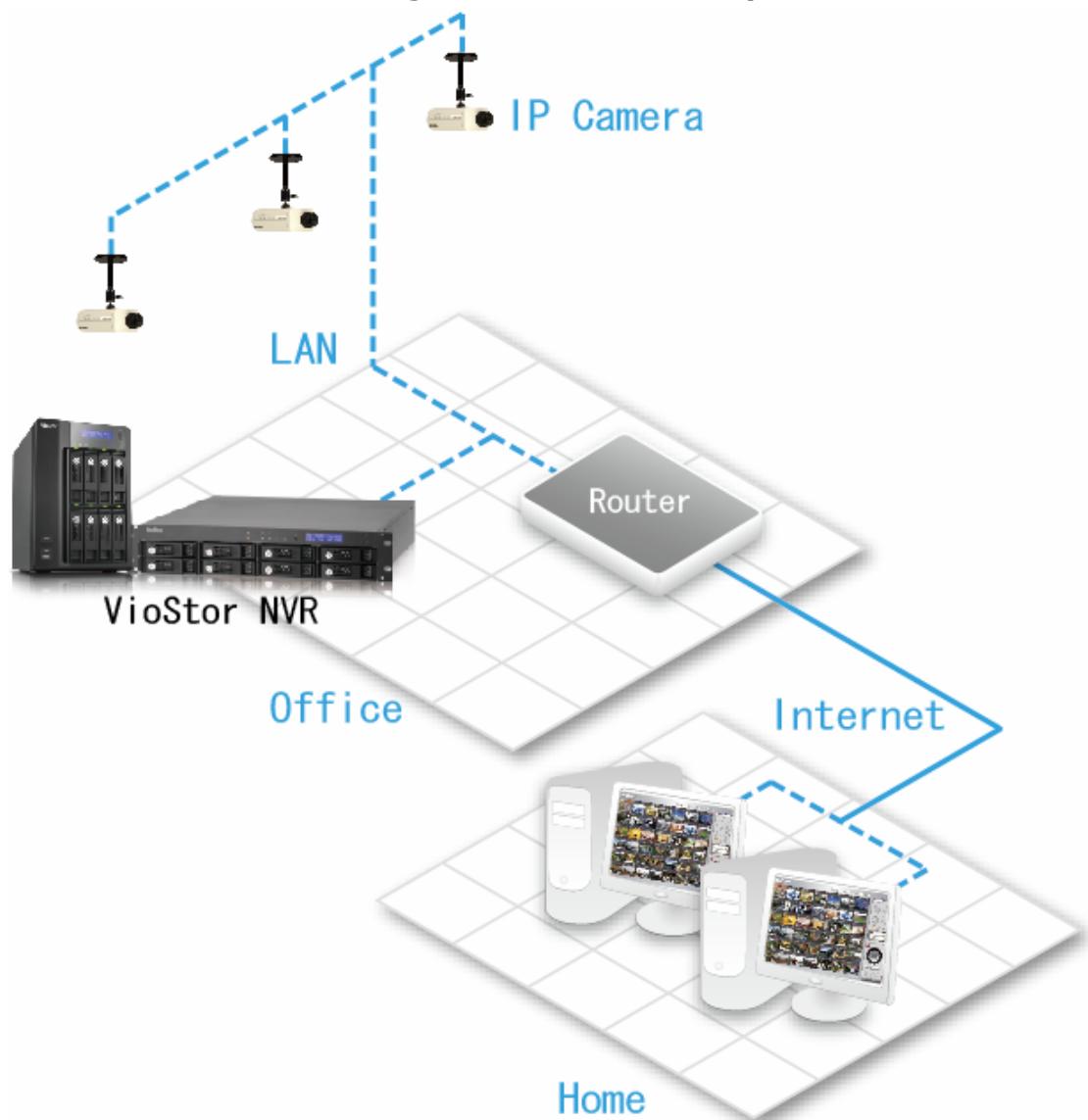


Network Surveillance Installation for SOHO and SMB

	IP Address
VioStor	192.168.1.1
PC	192.168.1.100
Camera 1	192.168.1.101
Camera 2	192.168.1.102
Camera 3	192.168.1.103

In the example, just add the camera to the VioStor by entering the cameras' IP address.

Environment 2: The VioStor and the IP camera are installed behind the router, while the monitoring PC is located remotely



	IP Address	Mapped port in router
VioStor	192.168.1.1	8000
Camera 1	192.168.1.101	8001
Camera 2	192.168.1.102	8002
Camera 3	192.168.1.103	8003
Router public IP	219.87.144.205	
PC	10.8.10.100	

In this example, to allow a remote PC to connect to the VioStor and the cameras, you need to:

Step 1. Set up port mapping (virtual server) on the router.

From	Forward to
219.87.144.205:8000	192.168.1.1:80
219.87.144.205:8001	192.168.1.101:80
219.87.144.205:8002	192.168.1.102:80
219.87.144.205:8003	192.168.1.103:80

Step 2. Add camera to the VioStor by entering the IP address of the camera in the "IP Address" settings, and the public IP address of the router and the mapped ports of the camera to the "WAN IP Address" settings.

Note: When configuring the IP camera, WAN IP and LAN IP must be entered.

To open FTP (port 21) and SMB (port 445) of the VioStor on WAN, you have to set the following port mapping settings:

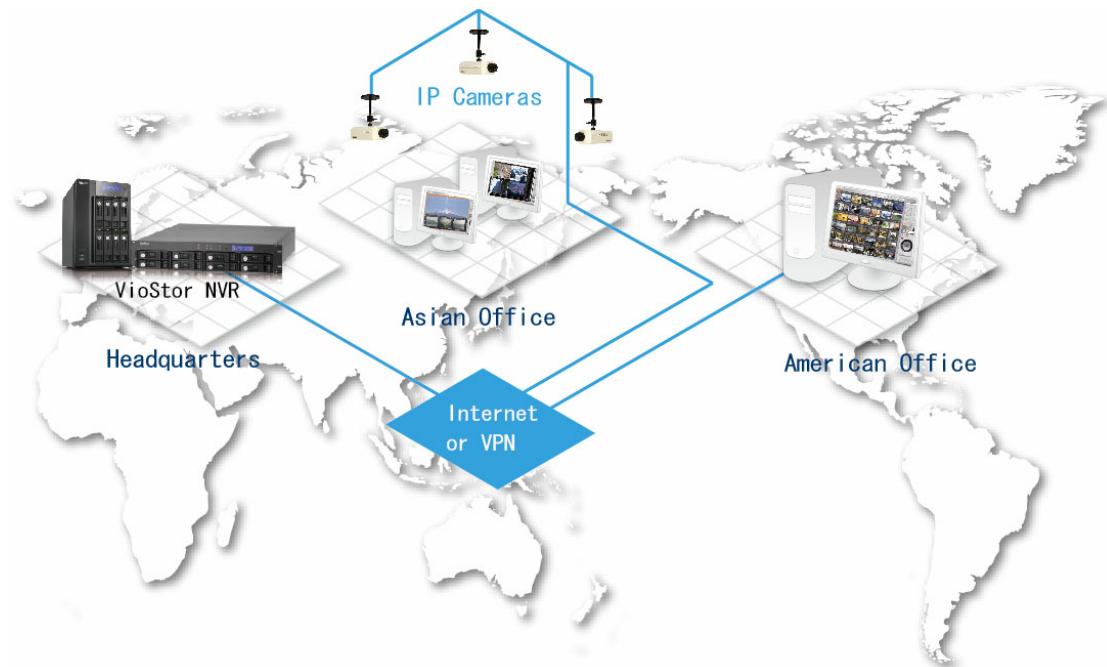
From	Forward to
219.87.144.205:21	192.168.1.1:21
219.87.144.205:139	192.168.1.1:139
219.87.144.205:445	192.168.1.1:445

After finishing the above two steps, you can access the VioStor via WAN by entering the IP address <http://219.87.144.205:8000> in the IE browser. Then login the VioStor via the correct user name and password.

If the port specified to the VioStor is 80, you can enter <http://219.87.144.205> to access the VioStor as the default port of HTTP is 80.

Note: If the router does not use a fixed IP, you will need to configure DDNS on the router. Other configurations are the same as above.

Environment 3: The VioStor and the IP camera are all located remotely



	IP Address
VioStor	219.87.144.205
Camera 1	61.62.100.101
Camera 2	61.62.100.102
Camera 3	61.62.100.103

In this example, just add the camera to the VioStor by adding its IP address to the "IP Address" settings.

Note: If there is a particular port for connecting the camera, please specify the port in the system configuration.

Environment 4: The VioStor and the IP camera are installed behind the router

	IP Address
VioStor 1	192.168.1.101
VioStor 2	192.168.1.102
VioStor 3	192.168.1.103
Router public IP	219.87.145.205

In the example, to allow a PC which is located remotely to access each VioStor via FTP, you need to:

Step 1. Set up port mapping (virtual server) on the router

	From	Forward to
VioStor 1	219.87.145.205:2001	192.168.1.101:21
VioStor 2	219.87.145.205:2002	192.168.1.102:21
VioStor 3	219.87.145.205:2003	192.168.1.103:21

You could directly connect VioStor 1 via FTP by `ftp://219.87.145.205:2001`

You could directly connect VioStor 2 via FTP by `ftp://219.87.145.205:2002`

You could directly connect VioStor 3 via FTP by `ftp://219.87.145.205:2003`

Step 2. Enable FTP Port Mapping on the VioStor

If you want to connect each VioStor via FTP by clicking "FTP" in playback page of each VioStor, you need to enable FTP port mapping in "Network Settings" > "File Services" on the system administration page and set the mapped port number.

	Mapped Port
VioStor 1	2001
VioStor 2	2002
VioStor 3	2003

After finishing the above two steps, you can access the VioStor via FTP by entering the IP address in the IE browser or clicking "FTP" in the playback page. Then login the VioStor via the correct user name and password.

Technical Support

QNAP provides dedicated online support and customer service via instant messenger. You can contact us by the following means:

Online Support: <http://www.qnapsecurity.com/>

MSN: q.support@hotmail.com

Skype: qnapskype

Technical Support in the USA and Canada:

Email: q_supportus@qnap.com

TEL: 909-595-2819 ext. 185

Address: 168 University Parkway Pomona, CA 91768-4300

Service Hours: 08:00-17:00 (GMT- 08:00 Pacific Time, Monday to Friday)

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Version 3, 29 June 2007

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